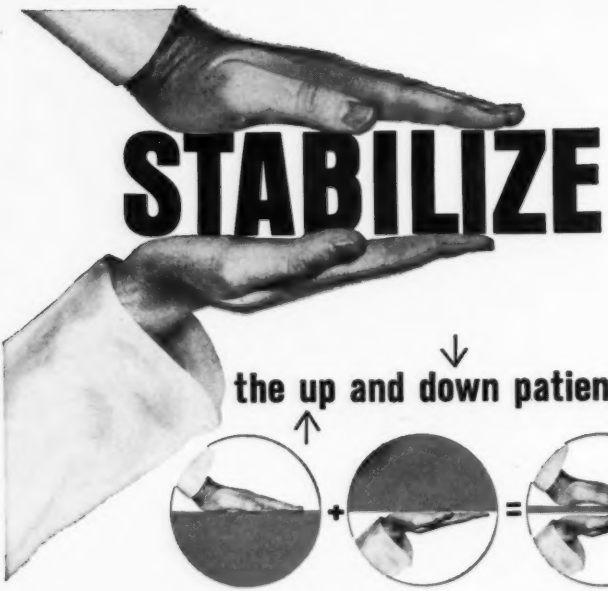
Clinical Medicine

Original Articles for June, 1956



To induce emotional equilibrium in those who swing from anxiety to depression, Serpatilin combines the relaxing, tranquilizing action of Serpasil with the mild mood-lifting effect of the new cortical stimulant, Ritalin. In recent months, numerous clinical studies have indicated the value of combining these agents for the treatment of various disorders marked by tension, nervousness, anxiety, apathy, irritability and depression. Arnoff,[1] in a study of 51 patients, found the combination of definite value in a variety of complaints, noting no effect on blood pressure or heart rate. Lazarte and Petersen[2] also found Serpatilin effective in counteracting the side effects of reserpine and chlorpromazine. They reported: "The stimulating effect of Ritalin seemed complementary to the action of reserpine . . . in that it brought forth a better quality of increased psychomotor activity."

1. Arnoff, B.: Personal communication. 2. Lazarte, J. A., and Petersen, M. C.: Personal communication.

Serpatilin Tablets, 0.1 mg./10 mg., each containing 0.1 mg. Serpasil® (reserpine CIBA) and 10 mg. Ritalin® hydrochloride (methylphenidylacetate hydrochloride CIBA).

Dosage: 1 tablet b.i.d. or t.i.d., adjusted to the individual.

Serpatilin™

(reserpine and methyl-phenidylacetate hydrochloride CIBA)

CIBA
SUMMIT, N. J.

s/2289M

EDITORIAL

The Aging Human Heart

Heart failure can often be avoided in the elderly by proper metallic ion and endocrine balance, vitamins, diet and tranquil surroundings

JAMES M. NORTHINGTON, M.D., *Editor*

This subject, always one of the greatest importance, has derived special significance from the increasing number of elderly people in our population. Of all the recent writings on that subject, that of Dock[1] covers the subject most satisfactorily. The substance of his wise dissertation is passed on to our readers with full assurance that its careful study will be to the great advantage of elderly patients.

With aging, all hearts accumulate pigment granules. If the heart muscle remains efficient, and therefore can atrophy as the demands of basal metabolic load, digestion and physical activity decline with advancing years, the ratio of pigment to myoglobin and myofibrils is high. On the other hand, if the myocardium becomes inefficient, if more muscle mass is needed for each unit of work, or if the load imposed by valvular disease, hypertension, or high volume flow of blood leads to hypertrophy, then the ratio of pigment to myoglobin and myofibrils is low.

The hearts of obese sedentary persons often show, even before 50, striking local atrophy and even complete disappearance of myocardial fibers in the right ventricle and right atrium. In these hearts, yellow adipose tissue, continuous with the abundant epicardial fat or developing *de novo* under the endocardium,

1. Dock, Wm., *Bull. New York Acad. Med.* 32:175-179, 1956.

completely replaces myocardial tissue.

The aging heart can beat efficiently in most people as long as the coronary system is not damaged by a disease which in itself is not a part of the aging process. However, with any type of injury or embarrassment to the heart, dilation and failure occur far more frequently after 50 than before 30 years of age. Heart failure and auricular fibrillation are frequent, even in mild hyperthyroidism, after 50; they are unknown, even in severe Graves' disease, before 30.

Most arrhythmias are due to delay in recovery of irritability. In young people, ventricular rates over 200 may last for many hours or even days before the heart dilates and signs of heart failure set in. In people over 60, heart failure is rare with complete heart block or in the fevers with bradycardia. But rates of 120 to 150, due to paroxysmal tachycardia or to fever, frequently precipitate failure in older people. The old myocardium has a slow rate of recovery, but contracts well as long as there is an adequate period for rest between beats.

EXCESSIVE AND DEFICIENT SODIUM AND POTASSIUM INGESTION

Ever since heart failure was precipitated by overdosage of desoxycorticosterone in treating Addison's disease, it has been realized that excessive sodium ingestion or retention led to heart failure not only by hastening edema formation, but by impairing myocardial efficiency. There is an ideal balance of metallic ions at which the myocardium functions best. Deficits of potassium and excesses of sodium seem to be particularly bad for the heart. The former is frequent with severe illness and in the diabetic, the latter is the normal state of civilized man, with a daily sodium to caloric intake from 10 to 30 times that of his anthropoid cousins and 5 to 10 times that of primitive races or the sweating masses of poor people throughout most of the world. It is difficult to be sure that the loss of myocardial efficiency with age is actually due to an involutional process, and not the cumulative result of decades of injury due to excessive salt intake and a sedentary existence, which requires less salt. Perhaps the best evidence that aging alone can impair myocardial function is that auricular fibrillation and heart failure occur in old horses that have not been on high salt diets and that have faultless coronary arteries.

DIET OR DIGITALIS

None of these anatomical or chemical changes impair the ability of the myocardium to respond to moderate loads of work and none of them cause heart failure. All reduce the ability of the heart to meet sudden increases in rate or in work per beat, and therefore predispose the heart to fail during febrile illnesses, after operations or pulmonary embolism, or with the chronic causes of cardiac strain—Parkinson's disease, Paget's disease, leukemia, anemia and hyperthyroidism—which affect so many elderly people and raise the pulse rate and the stroke volume of the heart. Pulmonic or systemic hypertension, also common in the aging in the United States, brings to light the inability of old hearts to cope with a heavy burden.

Whatever the background of failure of the myocardium, this type of disorder responds well to digitalis and to salt restriction. But elderly people do not take kindly to diets of rice, green vegetables, salt-free cheese and boiled meat. Those with cardiac disease who do adhere to such diets, with sodium content comparable to those in the natural diets of the great apes, show striking benefit even without digitalis. Most of our patients prefer a program based on mercurial diuretics, digitalis and Diamox.

Myocardial aging is slow in those who develop intercurrent illness, such as myocardial infarction, if a sound program of digitalization and sodium restriction or depletion is adhered to. We have seen patients with excellent capacity for physical effort ten, and in two cases twenty, years after their initial bouts of acute pulmonary edema. This can happen only when the physician and the patient refuse to accept the idea that aging of the heart (arteriosclerotic heart disease) is a relentless progressive disorder which of itself is fatal.

As with cerebral arteriosclerosis, the aging changes in the heart can be imitated by vitamin deficiency and endocrine imbalance. Until all these possible causes or potentiators of dysfunction have been treated or excluded, it is improper to blame aging. Just as a mind which might continue to function adequately in a calm home, with old friends and affectionate relatives, is apt to do poorly in a hospital, a nursing home, or a psychiatric ward; so a heart which would give no trouble on a good diet and in tranquil surroundings may rapidly fail amid social or family stress, with diets high in sodium and low in water-soluble vitamins. Aging of the heart or mind does less damage and advances very slowly in persons living under optimal conditions. The manifestations seen under other situations can be corrected and further symptoms prevented when the patient receives and accepts sound and optimistic advice.

Penicillin-Streptomycin Therapy For Bacterial Endocarditis Caused by Penicillin-Sensitive Streptococci

Twenty-three consecutive patients with bacterial endocarditis caused by penicillin-sensitive streptococci received short-term (2-weeks) combined penicillin and streptomycin-dihydrostreptomycin therapy. One million units of aqueous procaine penicillin and 1 gm. of combined streptomycin-dihydrostreptomycin (0.5 gm. of each) intramuscularly every 12 hours gave uniformly good results. No failures in treatment or relapses occurred in 20 patients; three died of complications of their valvular infection. A total of 46 patients have now been treated with short-term combined therapy with no failures of treatment or relapse. This therapy for endocarditis caused by penicillin-sensitive streptococci should be conventional. There should be an increased awareness of the occurrence of bacterial endocarditis to enable an earlier diagnosis and earlier treatment.

Geraci, J. E., *Proc. Staff Meet., Mayo Clin.*, 9:192-200, 1955.

Improved Methods in the Treatment of Impaired Hearing

Nerve and conduction hearing impairments that may be diagnosed and managed by the general practitioner by means of surgery, medicine or psychology

ARTHUR L. JUERS, M.D., *Louisville, Kentucky*

The first step is to make a diagnosis as to the type of deafness and its cause. After an appropriate history and examination, a few simple hearing tests should be done. This discussion will be concerned with hearing problems as seen and managed by the G.P.

Note whether the patient has any difficulty hearing the questions posed in obtaining the history. Ask some of the questions with the face turned from the patient to prevent lip-reading. Determine by having him repeat your words, the distance at which the patient hears ordinary conversation. Differentiating between a nerve and a conduction deafness is usually easily accomplished by a Rinne test with a 512 tuning fork. In a quiet room, if the patient hears the vibrating fork better by bone conduction than by air conduction, the Rinne is negative and the deafness is of the conduction type. If the fork is heard better by air than by bone, the Rinne is positive and the deafness is of the nerve type. A normal ear hears the fork better by air conduction. Cases of *combined*—conduction and nerve—deafness pose special testing problems which cannot be detailed here. A Schwabach test should also be

done. Assuming the examiner has normal hearing, this test is performed by alternately placing the vibrating fork on the patient's and the examiner's mastoid process and, as the intensity of vibration recedes, an estimation of bone conduction acuity is determined. In a conduction deafness, the patient's acuity would be equal to or better than that of the examiner and in nerve deafness the patient's bone conduction acuity would be less.

EXTERNAL AUDITORY CANAL

Complete occlusion of the external auditory canal produces a conduction type of deafness; with incomplete occlusion there is little or no loss of hearing. Cerumen is the most common cause. Meatal atresia of traumatic or congenital origin can be treated surgically.

MIDDLE EAR

Middle ear deafness is of the conduction type and will be discussed according to etiology.

1. *Central perforation of the drum.* The majority of central perforations will heal, with a substantial improvement in hearing. The simplest method of promoting closure consists of monthly meticulous marginal cauterization with trichloracetic acid and application of a paper patch. The eschar should not be more than 1 mm. and care should be exercised that the mucosa on the promontory be not touched. The number of treatments necessary varies considerably. Closure treatment should not be started unless the middle ear is dry.

2. *Marginal Perforation.* This is prone to develop cholesteatoma and should be seen by an otolaryngologist. Many ears with marginal perforation have normal or near norm hearing. This perforation cannot b closed by treatment. Appropria surgery can produce a dry ear a at the same time preserve the go hearing if the surgery is perform before cholesteatoma invades th middle ear. If the disease process h involved the middle ear, function reconstruction of a new conductio mechanism can, in some instance be accomplished by surgery.

3. *Otosclerosis.* A clinical diag nosis of otosclerosis is made whe a slowly progressing conductio deafness is found. The patholog consists of a gradual bony ankylosi of the stapes footplate. When stape fixation is complete, the Rinne te for both the 512 and 1024 tunin fork is negative. In general, th hearing impairment does not pro gress beyond a 50% loss unless there is associated impairment of cochlea function. Pregnancy seems to accel erate the bony ankylosis in a few instances.

There is no medical treatment which will delay progression of the lesion or restore hearing. When the impairment has reached the stage of difficulty in conversing, the pa tient has the choice between wearing a hearing aid, or having surgical restoration.

FENESTRATION

The fenestration operation offers an excellent chance of hearing per manently serviceable, if cochlear function is normal as determined by good bone conduction. The hearing obtained by a successful fenestration compares favorably with that pro vided by the use of a hearing aid. An old procedure, recently revived carried out through the ear canal

has the advantages of requiring only a few days of hospitalization and little postoperative care. The stapes can be functionally mobilized in only 30% of the cases. However, a fenestration operation can be carried out later in the event that mobilization is not successful.

An ear with chronic adhesive otitis media is suitable for fenestration if the tympanic membrane is intact and the middle ear cavity is inflatable.

Chronic serous otitis media poses varied and individual problems which are best managed by an otolaryngologist. As soon as the fluid is removed from the middle ear and its recurrence prevented, good hearing is restored. The sinuses, nasopharyngeal lymphoid tissue and allergy must be considered as etiological factors.

INNER EAR

The outlook as to prevention or successful treatment of nerve deafness in general is not encouraging. The occasional case with marked fluctuations and low pitched tinnitus can, in some instances, be benefited by treatment such as is used in Meniere's syndrome, including the consideration of a possible allergic etiology. Nerve deafness without considerable fluctuation of acuity is not amenable to treatment.

When the degree of hearing impairment reaches the point of difficulty in hearing conversation beyond 8 or 10 feet, some patients benefit considerably by hearing aid use, others very little or not at all. The patient with nerve deafness who experiences discomfort from loud sounds will be a poor hearing aid user. The patient with considerable high speech frequency loss and good hearing for low frequencies does not use an aid well. If the patient does not understand loud voice, he has poor speech discrimination and speech amplified through a hearing aid will be poorly understood. A hearing aid amplifies speech but does not improve the capacity of the inner ear and its central connections. In final analysis, if speech center facilities for testing the individual performance of various makes of hearing aids are not available for the problem cases, the patient should obtain an aid on a trial basis. If fair results are obtained on a short trial basis, then the aid should be purchased. With experience and persistence, the patient can expect increasing benefit.

INDICATIONS FOR HEARING AID USE

Whenever any irreversible hearing impairment has reached the point where difficulty is experienced in carrying on ordinary social and business activities, the use of a hearing aid should be considered. If facilities are available, a thorough otolaryngologic examination, including pure tone audiometric and some speech tests, should be performed. Test results are extremely helpful in advising the patient as to the benefit which can be anticipated from hearing aid use as well as the problems he will encounter. A hearing aid is not indicated for patients with unilateral impairment.

In performance, an air conduction receiver is always better than a bone conduction, even in pure conduction impairment. However, if there is chronic otorrhea or external otitis and the bone conduction is good, it may be advisable to use a bone conduction receiver in order to avoid

further irritation of the external auditory canal.

OTHER MEASURES

All patients with impaired hearing should pay attention to lip reading. If facilities are available, some basic instruction should be taken. This is particularly important for those who have nerve deafness with marked high frequency loss. The high frequency consonant elements of speech which are poorly heard are also most readily seen on lower facial movements.

Speech and hearing centers can also help the patient who has nerve deafness and poor discrimination by means of auditory training. This consists of teaching him to relate the somewhat distorted speech he hears, with or without a hearing aid, to more accurate identification of words. Patients with good speech discrimination and conduction deafness are not faced with this problem.

Appropriate psychological counseling of the patient is needed particularly in the problem cases. Explaining to the family and immediate associates that the patient may have difficulties is helpful. Older persons have particular difficulty in understanding rapid conversation. The speaker should talk to the hearing aid user at a moderate intensity with unexaggerated inflections.

Each patient with impaired hearing has individual problems. An adequate examination should be done in order to make an accurate diagnosis, establish a prognosis and determine the degree of hearing impairment. Proper consideration of his hearing needs in terms of employment, social and domestic environment will enable the physician to be of the greatest help to the patient.

After an Infarction

Now that myocardial infarction has become a *common* disease, there is intensified interest in what lies ahead for the patient with a "heart attack." A partial answer to this important question was given by the author after a study of 342 patients who had suffered myocardial infarctions.* In the first 24 hours, 5% died of ventricular fibrillation and 1% of shock. Functional disturbances (arrhythmias and poor circulation) brought death to 26% within the first post-infarction month. Under poor circulation may be included all the signs of congestive failure and of shock or circulatory collapse. Within one week of the acute episode of infarction, 92% had evidence of a hypodynamic circulation and 95% had such poor circulation, arrhythmia, or both.

Within a month after the infarction, 64% had had both arrhythmia and a poor circulation. For those who survived the first few months, the long-term prognosis was poor if partial (21%) or complete (6%) bed rest was still necessary. It was relatively good if full (26%) or somewhat lighter (21%) activity was possible; during three years of observation, the mortality rate of these patients paralleled that of the general population of similar age, sex, and race.

*Not included in this study were 55 patients whose death was associated with thrombosis or embolism outside the coronary vascular bed and who might, therefore, have had additional cause for hemodynamic changes.

Ball, C. O. T., et al., *Circulation* 11:749, 1955.

Clinical Experience with Intramuscular Butabarbital Sodium

If quicker action of barbiturates is desired for preoperative sedation, this sodium preparation offers an intermediate sedative and hypnotic

JOHN T. READ, M.D.,* *Columbus, Ohio*

The indiscriminate use of the barbiturates by the laity has led to an equally indiscriminate and undeserved wave of "anti-barbiturism." Because of their wide scope of usefulness, the barbiturates remain one of the most valuable group of drugs. By judicious selection of drug, dosage and route of administration, almost any degree of depression and duration of action can be obtained within wide bounds of safety.

Parenteral preparations of barbiturates are extensively used for the production of anesthesia, particularly by the intravenous route. For the production of sedation or hypnosis, however, administration is usually by the oral route. Frequently, in the symptomatic treatment of functional and organic diseases which require sedation or hypnosis, oral administration is impracticable, or a more prompt action than obtainable by the oral route is imperative. Jarvis[1] has indicated the advantages of intramuscularly administered barbiturates in preoperative sedation.

LONG-ACTING VERSUS SHORT ACTING BARBITURATES

Several of the barbiturates have

*Assistant Professor of Medicine, Ohio State University, College of Medicine.

1. Jarvis, J. R., *Ohio State M. J.*, 49:308, and *G.P.*, 7:61, 1953.

been made available in parenteral form for intramuscular or intravenous use, the most commonly used being the long-acting, phenobarbital sodium (Luminal® Sodium) and the short-acting, pentobarbital sodium (Nembutal® Sodium) and secobarbital sodium (Seconal® Sodium). Their usefulness notwithstanding, these two classes of barbiturates leave something to be desired in sedative-hypnotic therapy. The long-acting barbiturates produce hangover, and their long-continued administration even in ordinary doses may produce cumulative toxic effects. The short-acting barbiturates, in addition to being too intense in their effects and too brief in their action, are more apt to produce habituation and/or addiction. They are also more depressant to the heart, circulation and respiration. Excitation, when it occurs, is most commonly observed with the shorter-acting barbiturates.

Butabarbital sodium, by contrast, offers an intermediate sedative and hypnotic. It is destroyed rapidly in the body, probably in the liver, and is excreted as such in the urine only when used in excessive doses; therefore, it is not contraindicated in the presence of renal disease.

A solution of butabarbital sodium was recently made available for parenteral administration, containing 125 mg. of drug per cc., in a base of polyethylene glycol 40%, benzyl alcohol 2%.*

DIAGNOSES

The 34 patients (21 females, 13 males), most of whom were hospitalized, selected for this study had a wide variety of illnesses in which adjunctive parenteral sedative-hypnotic therapy was indicated. The diagnoses included such neurological conditions as anxiety tension, neuroses, alcoholism, neurodermatitis and paralysis agitans; circulatory diseases such as coronary occlusion, hypertension, cerebral thrombosis, pernicious anemia and arteriosclerotic gangrene; orthopedic diseases such as acute lumbo-sacral strain, intervertebral disk rupture and radiculitis; and an assortment of other conditions including rheumatic fever, bronchitis, chronic pyelonephritis, cirrhosis of the liver with ascites, pituitary tumor, duodenal ulcer with pylorospasm, and candidates for tonsillectomy, appendectomy and cystoscopy. All of these patients were experiencing insomnia, anxiety, or hyperexcitability of varying degrees which required sedation. The ages of these patients were fairly well distributed over a range of 5 to 76 years.

METHOD

The medication was administered intramuscularly in 1 and 2 cc. doses. The size of the dose and frequency of administration was governed by the needs and response of the individual patient. Of a total of 200 injections, 49 were in volumes of 1 cc., 151 in volumes of 2 cc. Twenty-two of these patients received daily injections for a week or more. Several patients received three injections on the same day, spaced four to six hours apart. The remaining patients received an injection daily for one to five days.

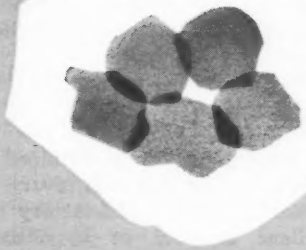
The medication was employed primarily as a night sedative and hypnotic; it was also used as a daytime and preoperative sedative and for the control of cough, epileptiform

*Bubartal Sodium Injection® supplied by the Columbus Pharmacal Company, Columbus, Ohio.

better talc makes better powder

PROOF

NOT abrasive,
irritating granules



BUT flat platelets...specially selected for uniformity...from the purest Italian talc... used exclusively only in Johnson's Baby Powder

ter lubricant action—
elets glide more smoothly

ids dust-cloud effect—
of platelets minimizes
borne particles

ering baby care through specialized research

BABY PRODUCTS DIVISION

Johnson & Johnson

convulsions, and the tremor of Parkinsonism. Each patient was carefully observed for the onset, depth and duration of action of the drug, and for the appearance of toxic or side effects and idiosyncrasy, as well as evidences of blood, kidney or liver damage. Restlessness, excitement, delirium (especially in elderly patients) and hangover were particularly looked for, as were significant changes in heart and respiration rates.

RESULTS

The clinical results obtained were highly satisfactory in every case. After each dose, satisfactory to excellent sedation or hypnosis was obtained (depending on the size of the dose). The onset of action varied in individuals from five to 20 minutes, usually about ten minutes, and its duration persisted for three to eight hours, averaging about five hours. Injection of 2 cc. was followed by deep sedation to hypnosis, usually depending on the size of the patient. In a child five years old, 1 cc. produced hypnosis. Sedation was invariably produced by 1 cc. injections. The hypnosis produced was similar in depth to natural sleep, with about the same degree of respiratory depression. Epileptic convulsions were effectively controlled and hypnosis produced for four to six hours with 2 cc. injections. One to 2 cc. injections worked well as a sedative preliminary to tonsillectomy (six cases), appendectomy and cystoscopy. Agitation following cerebral thrombosis was effectively controlled by 1 cc. injections. Daily injections of 2 cc. were used in marked neurodermatitis and pruritus with good effect as an evening sedative to permit sleep. In bronchitis it was found that injections of 1 cc. helped control night cough, permitting restful sleep. In Parkinsonism a dose of 2 cc. nightly produced hypnosis and assisted in controlling the tremor. In cardiovascular and orthopedic diseases injection of 1 to 2 cc. produced satisfactory night sedation.

The medication appeared to be well tolerated—no tissue reaction or muscle irritation was observed even after repeated injections at the same site. Pain, during and after injection, was negligible as compared to that usually accompanying the intramuscular injection of aqueous or propylene glycol solutions of the barbiturates. There was no restlessness, excitement, delirium, or other indication of idiosyncrasy in any age group. No evidence of blood, liver, or kidney damage was seen. The effect on heart and respiratory rate was not significant. Tolerance or accumulation was not detected during the course of the study. In one case of liver cirrhosis with ascites, no evidence of accumulation was observed, despite the patient's poor liver function after the injection of eight successive 2 cc. daily doses. No toxic effects were observed in a patient with chronic pyelonephritis when the same dosage schedule was employed for eight successive days. The drug was administered concurrently with hexamethonium, antabuse and dicumarol, with no apparent ill effects. Hangover, even after repeated injections, was negligible.

SUMMARY

1. The first clinical use of Butabarbital Sodium by the parenteral route is reported following an observation of its effects in a series

of 34 patients with a wide variety of diagnoses in which sedative or hypnotic medication was indicated.

2. Bubartal Sodium Injection administered intramuscularly was found to be an excellent sedative-hypnotic with an action intermediate between that of the short- and that of the long-acting barbiturates, asserting itself in about ten minutes and persisting for approximately five hours. The depth of depression produced closely resembles that of natural sleep.
3. The preparation is notably free of toxic or side effects, tissue reaction or pain at the site of injection. Accumulation was not observed even in the presence of impaired liver or kidney function. No idiosyncrasy or hangover followed its use.
4. The new polyethylene glycol-benzyl alcohol vehicle in which the drug was presented has decided advantages over the conventional vehicles in which barbiturates are presented for parenteral use.
5. Parenterally administered Butabarbital Sodium fills the need for a safe and effective general sedative-hypnotic, without the disadvantages of the long- or short-acting barbiturates, in those cases in which oral administration is impractical or prompt action is imperative.

Principles and Factors Influencing the Trend of Antibiotic Therapy

The basic principle for the rational use of antibiotics must be a definitive diagnosis and definitive bacteriology

MONROE J. ROMANSKY, M.D., *Washington, District of Columbia*

The antibiotics have given the physician not only confidence, but overconfidence. There should be discrimination in their use; a single antibiotic, whenever possible, in adequate dosage and for a sufficient length of time. There must be definitive diagnosis including bacteriologic diagnosis.

In our daily use of the antibiotics, we have become so impressed with their action that we tend to forget the host. The antibiotics act chiefly on multiplying organisms. This is of practical clinical importance particularly in chronic infections. Bacteria, although sensitive, may lie dormant in areas inaccessible to antibiotics. Subacute bacterial endocarditis and osteomyelitis are excellent examples. The inhibitory concentration and the lethal concentration are rather closely allied with penicillin bacitracin, streptomycin and polymyxin; while the gap between them is rather wide in the case of chloramphenicol and the tetracycline group. Erythromycin probably lies somewhere between these two groups. The basic problem occurs when the body defense of the host is minimal; e.g., in subacute bacterial endocarditis and

*Republished in part from the *Med. Ann. District of Columbia*, 9:443-460, 1955 with permission of author and editor.

chronic pyelonephritis. In these situations, maximal bactericidal effect is necessary.

Certain microorganisms have shown no evidence of developing resistance to the various antibiotics, particularly pneumococcus, meningococcus, group A beta hemolytic streptococcus, gonococcus, the treponemes, and *Hemophilus influenzae*. Infections caused by this group of microorganisms usually respond readily when adequate amounts of a single antibiotic are used for a sufficient length of time.

The enterococci are generally resistant to penicillin. Resistant to the tetracycline group are proteus, *Pseudo. aeurginosa*, and the enterococci, and the coli aerogenes group to a lesser degree. To chloramphenicol, which has not been extensively used since 1952, there appears to be a lower incidence of resistance.

Hospital strains of alpha hemolytic streptococcus have shown some degree of resistance to penicillin; they have a greater resistance to the tetracycline group and to chloramphenicol.

STAPHYLOCOCCAL INFECTIONS

In relation to resistance, most of our attention has been focused on the staphylococcus. It is here that *in vitro* sensitivity tests are most often required and combinations of antibiotics will be most frequently used.

In staphylococcal infections other than endocarditis, erythromycin has been very effective; in staph. endocarditis erythromycin and chloramphenicol are the best combination. It appears that there has been no great increase in the number of staph. strains resistant to erythromycin since 1952.

With the advent of a new antibiotic, there appears a decrease in the number of strains resistant to the older antibiotics. There will probably be a continuing need in the future for new antibiotics and for a new evaluation of old ones.

The fatality rate for staph. septicemia before the advent of the sulfonamides was 80%, slightly less during the sulfonamide era; just after the introduction of penicillin, 28%. In recent years it has again risen to 50%, apparently because many staphylococci were resistant to the available antibiotics.

Not infrequently an organism is reported to be resistant, yet the clinical result is satisfactory. Relapses may occur in the presence of apparently effective therapy when the body immunity is unable to cope with the excessive number of resistant strains.

Another factor is the cross resistance which exists; e.g., microorganisms which have developed resistance to one of the tetracycline group are very likely to show resistance to another member of this group.

Use a single agent, unless there are specific reasons for the use of two. Group A beta hemolytic streptococcus, pneumococcus, meningococcus, gonococcus, and the spirochetes are all very sensitive to individual antibiotics, do not develop resistance, and require no more than one antibiotic.

COMBINATIONS OF ANTIBIOTICS

Streptomycin or dihydrostreptomycin and para-amino-salicylic acid or isoniazid should be used in tuberculosis; streptomycin and one of the

tetracycline group or streptomycin and erythromycin in Brucellosis. Klebsiella or Friedlander's pneumonia, which still has a mortality rate of 50 to 70%, seems to respond best to streptomycin and one of the tetracycline group or chloramphenicol. Pseudomonas infections, when not responding to polymyxin B, may respond to polymyxin and streptomycin, or polymyxin and one of the tetracycline group. Generally, *in vitro* sensitivity tests are helpful in indicating the agent for Proteus infections; which may be one of the tetracycline group, furadantin, chloramphenicol, or occasionally a soluble sulfonamide. The combination of streptomycin with one of the aforementioned drugs may be needed.

Penicillin-resistant staphylococci respond to erythromycin when endocarditis is not a factor. With endocarditis due to this organism, best results appear with erythromycin and chloramphenicol.

In mixed infections such as peritonitis, penicillin and streptomycin are the agents of choice. For mixed infections in the pulmonary system, the choice of an agent is generally dependent upon the microorganism isolated.

There is no fixed rule for combinations of antibiotics that will be synergistic or antagonistic; hence the need for definitive bacteriology and *in vitro* sensitivity studies for the selection of the proper agent or agents.

The complications of antibiotic therapy may be classified as those due to:

1. Innate toxicity of the antibiotics.

2. Complications incident to the host's response to antibiotic therapy.

3. Host complications incident to the response of the microorganisms.

Penicillin, in the ordinary therapeutic dose, has no innate toxicity.

Streptomycin and dihydrostreptomycin. Ototoxicity is the main difficulty here. By discontinuing the streptomycin early enough, the vestibular damage will usually be reversed. With the usual dose now given in tuberculosis, 1 gm. twice a week, these difficulties are infrequent. However, it is best to interchange streptomycin and dihydrostreptomycin on alternate months or use a combination of streptomycin and dihydrostreptomycin for therapy.

Tetracycline family. Most common adverse effects are nausea, emesis and diarrhea. In the anorectal syndrome: pruritis, multiple fissures, ulcerative proctitis, abscess and fistula, ulcers of the rectum, and ulcerative colitis. None of these may appear in a prolonged course, or they may appear after just one or two capsules. As to the anorectal syndrome, the lowest incidence seems to occur with tetracycline. For these complications, most benefit is derived from simultaneous administration of potent vitamin B-complex, buttermilk or yogurt. Hepatoxicity has been noted with chlortetracycline, suggesting that no more than 2 gm. in divided doses be given intravenously per day. If given orally *and intravenously*, no more than one gm. per day intravenously should be given. Oxytetracycline may be implicated in the same fashion. In cases of liver or kidney damage, the tetracycline group should be used with care.

Patients have been known to de-

velop fatal staph. infections while under the influence of cortisone.

Penicillin should not be given to patients in a comatose state nor to those unable to give an adequate history.

Individuals sensitive to penicillin should carry an identification card stating this fact.

Cortisone should be used with special caution in patients with infectious diseases or those in whom the possibility of infection exists. The clinical picture under cortisone treatment is not a reliable guide to the progress of infectious disease. Prophylactic chemotherapy in these circumstances should be maximum, and blood cultures should be made periodically.

ACTH should be used with cortisone to maintain adequate adrenal function.

The Normal Senescent Requires An Understanding Doctor, Not Commitment

Mental hospitals are over-crowded because they are being used as shelters for persons no longer desired by society. These people do not require the facilities of such institutions, and are capable of adjustment to living outside an institution. Commitment should be considered only for patients who show markedly aggressive tendencies, delusions or hallucinations.

In some individuals, old age brings about a cessation of emotional hostilities, establishing an improved relationship with associates and environment. At 65, most men have decreased sexual capacity, some with relative and some with complete impotence. Women after the menopause often develop increased sexual interest and capacity. Loss of purpose and family importance are the causes of many minor ailments frequently ascribed to the climacteric.

Well adjusted persons tend to be active in social clubs and nonorganized informal groups of persons of various ages. Interest in a variety of activities favors adjustment. The best adjusted are those with means to meet immediate needs comfortably. All of the men and some of the women in the high personality ratings in a study of 100 persons beyond 65 were still working and enjoying their work.

The doctor can aid in a healthy transition to old age if he recognizes the normal physiology and psychology of the aging. He can help the elderly patient to preserve his individuality despite inactivity and organic dysfunction. The exercise of patience and individual attention are necessary in order to prevent personality disintegration and to maintain function at the highest possible level. It is more helpful to recognize capacities than incapacities.

The Psychiatric Bulletin, 2:27-29, 1955.

Cholecystography

Improved techniques and more effective materials which may be used to increase the reliability and promote a more efficient use of this diagnostic procedure

SAM A. OVERSTREET, M.D., *Louisville, Kentucky*

No x-ray diagnostic procedure in the study of gastrointestinal diseases is more widely used than cholecystography, and none is more reliable if it is correctly done. The test was perfected by Dr. E. A. Graham and Dr. W. H. Cole of St. Louis, and it rapidly won acceptance after publication of their report in 1924. While many improvements in materials used and in technique have been made, the basic principles remain the same. Iodine has been the contrast medium, always used in increasing percentages as was found safe. It is the increase in iodine content that has produced sharper contrast in gallbladder shadow. The hepatotropic vehicle in which the iodine is used has likewise been changed and improved, resulting in better utilization of the iodine.

Early use of cholecystography was done by intravenous injection of the dye. The percentages of toxic reactions were not large; but, with the development of oral preparations giving fewer reactions which also could be more rapidly controlled, the intravenous technique was almost completely abandoned. During the ten-year period prior to 1950, there were significant improvements in the oral preparations available (usually tablets), and the dosage required for a good test was standardized. The tablets now generally in use contain 66% of iodine. Rarely are

any unpleasant effects noted except a moderate dysuria or a mild diarrhea of a few hours' duration. Excellent gallbladder visualization is obtained, and the contrast is so clear that it greatly improves the ability to detect stones.

CONTRAINDICATIONS

Careful attention to the preparation of the patient and administration of the dye are essential. Jaundice, in any degree, indicates some disturbance of liver function and will be associated with poor utilization of the dye, hence is a contraindication to cholecystography. Any obstruction of the intestinal tract which would interfere with absorption of the dye is likewise a contraindication. Gastritis, enteritis, deficiency states, or even extensive malignant involvement of the stomach or intestinal tract usually offer no barrier to the usefulness of the test. Fats will provoke contraction and emptying of the gallbladder so that the dye is not retained. A light meal, omitting fats, is advisable before the dye is given. For the same reason, omission of food for 14 hours, until the first films are made, is necessary.

Gas in the intestinal tract is likely to overlie the gall-bladder and obscure or confuse shadows cast by stones, polyps, or other articles, within it. A laxative, six hours before administration of the dye, will generally provide the best disposition of excessive gas. With an acutely inflamed or tender abdomen, a laxative is often inadvisable, in which case one or more enemas are effective, using saline. Pitressin or prostigmin by intramuscular injection may displace gas found to be interfering with the test at the time the films are being made.

It is advisable to perform cholecystrography before administering barium for intestinal-tract x-ray study, since barium-filled loops of bowel may render the test useless. It sometimes becomes necessary, because of the limitation of time, to combine the two examinations. Occasionally the interference of shadows is such that the test has to be repeated, but in more than 75% of instances this has not been necessary. Combination of cholecystography and intravenous pyelography on the same day is not very practical. Unabsorbed portions of the tablets in the intestine may easily interfere with the shadows of the kidney and ureter.

Skill and resourcefulness on the part of the x-ray technician in obtaining good gallbladder shadows are essential to a satisfactory study. The patient should not be allowed to leave the table until the films have been developed and their quality appraised. If the contrast is poor, a change in exposure may be indicated. If the shadow is obscured by the spine or other structure, or overlaid by a gas shadow, the patient should be rolled into a different position and new films obtained.

FOOD CONTENTS

Some have abandoned the use of fatty meal, feeling that the demonstration of good contraction of the gall-bladder is not essential to the test. We continue using it, because the demonstration of good emptying after fat ingestion is an important part of the proof of good function. Moreover, small stones are often more clearly demonstrated in the well-contracted organ. Occasionally

having the patient eat a regular meal and taking a film an hour afterward decreases the density of the dye in the gallbladder and gives better information as to the presence or absence of stones. Films taken in the lateral or erect position also may show layering of small stones or sand, whereas films in the recumbent position failed.

Shortening of the time consumed in cholecystography by taking spot films under fluoroscopic guidance is now practiced widely. This often effects a saving in the number of films necessary. It is of some value to proceed with x-ray study of the stomach and duodenum while the gallbladder is still filled. The relationship of the gallbladder to the duodenum can thus be observed.

REPEATED EXAMINATIONS

Failure to visualize the gall-bladder at a single examination is only indication, not proof, of non-function. The test may well be repeated on the following day, or after a month of medication, and good visualization obtained. Unless stones are clearly demonstrated or the clinical indications are very definite, surgery should not be advised because of non-visualization on a single test. If, after two or three tests under good conditions, the gallbladder fails to show function, one may safely presume it is a diseased organ—in all probability containing stones—and surgery may be advised with reasonable assurance.

When a cholecystogram is to be repeated an increased dose of the dye—a "double dose"—is often used. It is questionable whether this is of value unless the patient is very large or obese. With the high iodine content of the dyes now in use, the prescribed amount is almost always adequate. However, the "double dose" method has gained wide usage and, since the preparations now employed are relatively inexpensive and non-toxic, no harm is done.

CHOLECYSTOGRAPHY FOR CHILDREN

Age of the patient should seldom deter us from the use of cholecystography since cholecystitis, with or without stones, has been repeatedly demonstrated in children. It would seem reasonable that if gastrointestinal complaints in children are so pronounced or so persistent as to indicate an x-ray study of the intestinal tract for ulcer, the gallbladder should also be examined. This procedure has proven useful in our hands in establishing diagnosis of gall-stones in two young girls, 13 and 14 years of age.

Prior to 1953, post-cholecystectomy complaints were not amenable to very satisfactory study except by surgical exploration. There was then developed a newer and much less toxic form of dye for intravenous use, which has proved of very real practical aid, particularly in visualization of the extrahepatic ducts, remnants of the gallbladder and sinus tracts. If these parts are clearly visualized, stones or constriction of the ducts with dilation proximally may well be demonstrated. Optimum visualization will usually result from one-half to one hour after injection of the dye. When recognizable shadows are found, serial films may be made at ten minute intervals, in various positions, until the study is completed. Since the dye is excreted by the kidneys, it is usually found in fairly good concentration in the kidney pelves by the time the gall-

duct study is finished. The toxic reactions which have resulted have been few and mild. It would seem safer for the present, however, to hospitalize the patient if this procedure is to be carried out.

Thus another very brilliant chapter has been added to the long story of a phenomenally popular and useful procedure. No test used in gastroenterological study has been more systematically studied and improved, nor provided more assurance to the diagnosis of gallbladder disease, than has cholecystography during the past thirty years.

The Cardiac Should Work

The cardiac patient, with rare exceptions, not only can but should work. The amount of heart disease is far more important than the kind, since there may be all grades of every kind. Only the most severe grades prevent work. This statement applies to congenital defects, inactive rheumatic heart disease, hypertension and hypertensive heart disease, chronic cor pulmonale and coronary heart disease. If the patient has active rheumatic fever, subacute bacterial endocarditis, congestive heart failure, angina pectoris decubitus, or acute coronary thrombosis, with or without myocardial infarction, he or she, of course, should not work for the period of convalescence.

Recognition that some heart disease is not permanent has been one of the most significant lessons learned in the last 30 years. Many patients are well and active today who were almost fatally ill with heart disease a good many years ago. This statement applies in particular to coronary, but includes rheumatic heart disease, hypertensive heart disease, subacute bacterial endocarditis and even congenital cases who either spontaneously, or by means of therapy, have greatly improved.

We are learning about helpful preventive measures, such as use of antibiotics to prevent rheumatic fever and subacute bacterial endocarditis, control of syphilis, better ventilation of factories to cut down the incidence of cor pulmonale, and in all probability the general inculcation of better health habits, of less fat in the diet and more exercise for the candidates for early coronary heart disease.

Occupying himself or herself, especially in useful and remunerative activity, helps nearly every cardiac patient in body, mind and soul. If any one of these three sides of the whole man is helped, there is a favorable effect on the other two and, even physically, work with at least a certain amount of exercise favors not only a sense of well-being but also the nervous state, the digestion, the bowels, the muscle tone, the respiration and the circulation at large. Some cardiacs can profitably indulge even in strenuous work and sports, if they have but little heart disease. Each one must be judged individually.

Much of the best work recorded in history has been accomplished by physical cripples. Since most cardiacs are not even cripples, except as they have been so labelled, the world suffers from the neglect of their services.

White, Paul Dudley, *Northwest Med.*, 55:286-287, 1956.

Vaginal Tampons for Menstrual Hygiene Second Report—An 18-year Study

Extensive studies show that no irritation was produced or aggravated by the use of tampons, and that they assist in the treatment of sterility

KARL JOHN KARNAKY, M.D.,* *Houston, Texas*

In 1943, after a five year study, this author published his first report[1] on this subject. During the past thirteen years the author has kept in mind the following questions:

1. Can unmarried women use tampons?

2. Do vaginal tampons cause cancer of the cervix and vagina, erosion (ulcer) of the cervix, vagina or labia?

3. Do tampons block the menstrual flow?

4. Do tampons irritate the vaginal mucosa?

5. Should tampons be worn only at the start and at the end of menstruation?

6. Do vaginal tampons solve the problem of menstrual odors?

7. Are tampons comfortable and do they help the psychological attitude toward menstruation?

BIOPSY STUDIES

During the past 18 years, more than 10,000 biopsies (vaginal, cervical, and endometrial) have been taken followed by the insertion of a Tampax into the vaginal vault, to be worn for 24 to 48 hours. This tampon absorbs the blood and serum

*From the author's Research Clinics, Houston, Texas.
1. Karnaky, K. J., *West. J. Surg.*, 51:150-152, 1953.

and aids the clotting of blood at the biopsy site. In 25% of these patients a second tampon is inserted for another 24 hours.

In the Follow-up Clinic, where routine biopsy was performed on all cervical lesions for the past 5 years, a Tampax has been inserted immediately following the procedure. No harm to the vaginal epithelium has resulted.

STUDIES OF VAGINAL SECRETION

More than 1000 pH readings; over 1000 vaginal flora studies, and over 1000 glycogen determination have been made. All of these patients had many gross visual and pelvic examinations before, during and after the use of tampons. Many routine laboratory tests have been performed, and over 4000 private patients have been questioned.

The questions asked most frequently in this 18-year study are as follows:

1. Can unmarried women use vaginal tampons? The answer is yes, in most instances. Over 500 young women from 17 to 21 years of age used tampons of number and size according to amount of flow and size of hymenal ring and vagina. Small tampons were preferred at the beginning and at the end of menstruation. Many of these women inserted 2 to 3 tampons when the flow was excessive, plus wearing a perineal pad. They preferred tampons over external pads, since with tampons no belt had to be worn.

2. Do vaginal tampons cause cancer, erosions (ulcers) of the cervix, vagina or labia? By careful observation in over 5000 women who wore Tampax during their menstruation during the past 18 years, no irritation, leucorrhea, vaginitis or cervicitis has been observed. To the contrary, they have been found to be of value in the treatment of vaginal and cervical infections. When the tampon is inserted at the introitus it causes such discomfort that the patient usually has to insert it further or remove it.

A series of 100 women were given the super tampon to insert night and morning, every day, between and during periods. These tests were carried on for 6 months to 4 years. Before, during and after the use of the tampon, a bacterial culture was taken, pH determined, amount of glycogen recorded, a bit of vaginal or cervical tissue removed, and a record of the gross findings made. More than 5000 women have been examined who had worn tampons during their menstrual periods for 1 to 15 years.

In 582 sterility cases the patient inserted a Tampax every morning and removed it just before coitus at night, during 5 consecutive, supposedly ovulation days. Many of them became pregnant while using the author's Tampax technic. Gross examinations of these vaginas revealed no irritation.

During or after the use of tampons no cancers, no erosions (ulcers) of the cervix, and no irritations have developed. The bacterial flora remained normal when it was normal before the use of tampons. Abnormal vaginal floras became less abnormal. The pHs remained within normal limits. The vaginal and cervical biopsies showed no abnormal changes. Grossly, no vaginitis was produced.

3. Do tampons block the menstrual flow? No. Many physicians have packed the vagina tightly with cot-

on or gauze because of dysfunctional uterine bleeding before laparatomy or culdoscopy. In no instance has blood been found blocked and forced back through the cervix and uterus into the pelvic cavity; therefore a loosely-placed vaginal tampon could not cause blocking of the flow. Tampax actually acted as a wick to bring the blood from the external os.

4. Do tampons irritate the vaginal tissue? Ten years of examining women who had been wearing Tampax has not disclosed irritation, even in the 50 women who accidentally left tampons in for 30 days. And these women had coitus twice weekly and douched once or twice daily. In patients with profuse leucorrhea, tampons are ideal for absorbing this excess secretion. Even in vaginitis, the tampons improve the infection. They do produce an uncomfortable sensation if they are placed at or in the introitus. Properly placed posterior to the hymenal ring and deep in the vagina, they will not do harm.

Two patients who were going to the sterility clinic inserted tampons night and morning in an attempt to become pregnant, and they succeeded. They continued inserting one tampon night and morning during the entire pregnancy and up to the time that labor began. No harm was done to vagina or cervix in either case, as determined by tests of the vaginal pH, glycogen, bacterial flora, vaginal biopsies and gross examinations. There was no postpartum infection in either case.

It has been estimated that more than six billion Tampax tampons have been sold over a period of twenty years, and no harmful effects have resulted.

5. Should tampons be worn only at the start and at the end of menstruation? Women whose menstrual periods were normal could wear tampons during the entire period. Some who had excessive flow on some days inserted 2 to 4 tampons, plus wearing an external pad. Some were not able to wear tampons when the flow was profuse. Such persons must consult their physician as soon as possible during the actual flow.

6. Do tampons solve the problem of menstrual odor? The tampon absorbs serum, purulent material, and sero-sanguinous secretions, preventing these secretions from undergoing putrefaction, and in so doing, it solved the problem of disagreeable odors in many cases.

7. Are tampons comfortable and do they help the psychological attitude toward menstruation? Patients do not know that a tampon is in the vagina, if it is inserted deep enough. It must be inserted the entire length of the vaginal tract. Correctly placed, it lies against the cervix or in one of the fornices, anterior, posterior, right or left lateral. If the tampon lies on or in the hymenal ring, it will give discomfort.

A large number of patients have volunteered the statement that premenstrual and menstrual tension have disappeared since they are no longer bothered or reminded of it by the presence of an abdominal girdle and a band between their thighs. Many say that they can forget that they are menstruating.

TAMPAX AS AN AID IN STERILITY

For the past fifteen years, Tampax has been used as an aid in the treatment of sterility. It is well known that vaginal secretions are detrimental to spermatozoa. In the study of vaginas after the removal of Tam-

pax which had been in place for four or more hours, it has been observed many times that most of the vaginal and cervical secretion was absorbed. On artificial insemination, with and without the use of Tampax, it was shown that there were more spermatozoa in the vagina when the secretions were absorbed by the tampon.

This technic was used in all sterility cases during the past fifteen years, a total of over 500 consecutive sterility patients. Of course, other causes of sterility were found and corrected, but Tampax was used routinely. In none did the tampon irritate the vaginal mucosa or cause any ulcers of the vagina or cervix. No harm was produced in these patients, and many who never wore Tampax before during their menstruation learned how to insert the tampons and thereafter used them during their menstruation.

CONCLUSIONS

Vaginal tampons have been shown to be free of harm or irritation to the vaginal and cervical epithelium. No cervicitis; no erosion (ulcer), superficial or granular; no odor; and no vaginitis has been aggravated or produced during the past eighteen years in the study of vaginal Tampax.

Not one case of endometriosis or endometritis was found that could be attributed to Tampax vaginal tampons.

2. Ibid: Practical Office Gynecology, Charles C. Thomas & Son, Springfield, Ill.

Outpatient Treatment of Tuberculosis

Robins, et al., in New York City, treated 494 outpatients with isoniazid and PAS without restriction of activity: 11% discontinued treatment voluntarily within 4 months; 6% showed a worse condition by x-ray examination within 6 months; in only 52% of those examined at the end of 6 months' treatment had the sputum been converted to negative. This result is in contrast to that in 94% of hospitalized patients treated with the same drugs for the same period whose sputum, or gastric contents were negative to culture in a study conducted under the auspices of the U.S.P.H.S.

From this study and from others it is clear that outpatient treatment of T.B. should not be attempted before or instead of hospitalization if hospital beds are available except in most carefully selected and exceptional cases; e.g., those of unusually intelligent and cooperative patients with a minimal pulmonary lesion and T.B. negative sputum, the patient over 70, with a good home in which he can be isolated with a minimal chance of infecting others.

In contrast to the poor results of outpatient treatment of unhospitalized patients, the results of continued drug therapy after discharge from a T.B. hospital have been good.

Drug outpatient therapy is essentially the same as for hospitalized patients.

Davies, R., *J. Florida M. A.*, 11:371-373, 1955.

Melanotic Whitlow

Many confusing and conflicting factors concerning the incidence and diagnosis of this condition are explained and clarified

GEORGE E. MORRIS, M.D., *Boston, Massachusetts*

Ever since Hutchinson[1] published his findings on melanotic whitlow, papers have appeared sporadically in the medical literature. Each succeeding generation has brought this literature up to date, with cases presented. Even now, melanotic whitlow is often overlooked.

Reviews of the literature appear to have been inconsistent as to incidence, as the following will illustrate:

In 1927, Womack[2] in a monograph cited a total at that time of 25 reported cases.

Twelve years later, Levine and Lisa[3] stated that only 17 proved cases had been reported, nearly all of these in the foreign literature.

In 1950, Russell[4] reported that "a review of the literature since 1939 reveals no additional reports on cases of primary carcinoma of the nail." He also referred to "the apparent rarity of this lesion, particularly when it is associated with erosion of the bone."

In 1952, Pack[5] stated that he and his associates had seen 35 such cases at the Memorial Cancer Center in New York City.

With these conflicting figures in mind, I shall not now attempt to bring to date the total number of reported cases; suffice it to say that

1. Hutchinson, J., *Brit. M. J.*, 1:491, 1886.
2. Womack, N. A., *Arch. Surg.*, 15:667-676, 1927.
3. Levine, J., and Lisa, J. R., *Arch. Surg.*, 38:107-112, 1939.
4. Russell, L. W., *J.A.M.A.*, 144:19-21, 1950.
5. Pack, G. T., et al., *Ann. Surg.*, 136:905-911, 1952.

the foreign literature still contains more case reports on melanotic whitlow than does our own literature.

It is my opinion that this lesion, although far from being common, has been encountered more frequently than is realized; and that one reason for the reported cases numbering less than 100 since Boyer (as quoted from Hertzler)[6] first described it in 1854 is due in part at least, to the confusion in nomenclature—

(Hutchinson's) Melanotic Whitlow
Subungual Melanoma
Melanosarcoma of the Nail Bed
Melanoepithelioma
Melanoblastoma of the Nail Bed
Primary Carcinoma of the Extremities
Primary Carcinoma of the Nail.

The disorders which are to be differentiated from melanotic whitlow are:

1. Paronychia; whitlow or felon; osteomyelitis.
2. Pyogenic granuloma.
3. Onychomycosis nigrescens.
4. Subungual hematoma.
5. Primary syphilitic chancre of the finger.
6. Gangrene of the toe.
7. Dupuytren's exostoses.
8. Subungual fibroma.
9. Subungual keratosis.
10. Subungual epithelioma.
11. Subungual angiosarcoma (Kaposi's disease).
12. Subungual tumors of the glomus.
13. Metastatic tumors of the nail bed.
14. Tuberculous dactylitis.[7]
15. Syphilitic dactylitis.
16. Enchondroma.

6. Boyer, quoted from Hertzler, *Gaz. med. de Paris*, 1854, p. 212.
7. Hertzler, A. E., *Arch. Dermat. & Syph.* 6:701-709, 1922.

REPORT OF A CASE

A white man, 68 years of age, had a lesion on his left thumb which had appeared some four years previously and who had been "burned" on two occasions by different doctors who told him he had a "wart." The thumb showed a pigmented black, shiny growth with much granulation tissue, and complete loss of the nail. There were no palpable glands in the antecubital area or in the axilla. An x-ray of the chest was normal.

A clinical diagnosis of melanotic whitlow was made, and a surgeon amputated the thumb. The biopsy report was malignant melanoma. The man has been followed for six months and no evidence of metastases has yet appeared.

DISCUSSION

The first appearance of melanotic whitlow is a discoloration of the nail-bed, "developing from the epithelium of the bed, the matrix or the nail grooves."[8] It then extends *via* the regional lymphatics, with metastases (if any) first noted in the antecubital and axillary spaces. There then develops a black, fungating ulcer involving the nail-bed, well demarcated from the surrounding skin. The local lesion is limited by the fascial planes of the distal phalanx, in a manner similar to that seen in infections.[2] Pain is not often a prominent feature.[3] A history of trauma may be obtained. Although subungual melanoma should be easy to detect in its early stages, perhaps because of its so-called "rarity," the physician is apt to overlook its proper diagnosis, to the great detriment of the patient.

8. Pardo-Castello, V., Diseases of the Nail, Springfield, Ill., Chas. C. Thomas, Publisher, 1941.

As the tumor is more commonly seen in persons beyond the age of forty,[2] any lesion in the middle-aged, particularly if it is pigmented black or dark brown, and is persistent and/or ulcerative, should suggest melanoma.

Amputation is the treatment of choice, but the site of amputation and the necessity of supplementing it with x-ray therapy are debatable points.[4] The best chance for cure is at the time of first excision.

Painless Proctologic Examination

The examination will be easier, more complete and less pathology will be overlooked if the patient is comfortable. During the last two years the routine use of a topical anesthetic, Tronothane, has proved its safeness and efficacy. Several patients have been adequately examined whose family doctor had been unable to make even a digital examination using the little finger.

Tronothane has been used in obstetrics, gynecology and dermatology. It is not intended for prolonged use, but for effect during the time required for diagnosis and establishment of specific therapy.

With the patient in the lateral Simms position, and after inspection of the perianal area, a small cotton applicator soaked in Tronothane, 1% is inserted in the anal outlet, and left in position while the examiner puts on a finger cot or glove. The solution may be sprayed on the skin at the anal outlet.

Tronothane jelly, 1%, is then applied liberally to the finger, the applicator is removed and the jelly is gently massaged into the canal. The finger is inserted slowly, pointing toward the navel and allowing the sphincter to relax ahead of it. After several minutes, the anoscope or proctoscope, lubricated with this same jelly, is gently inserted. The jelly is transparent and does not obscure the view.

Tronothane jelly relieves pain of external hemorrhoids which are too extensive for office excision while the patient is awaiting operation, or affords pain relief until thrombosis is absorbed. Fissures and anal ulcers can be given relief until surgery can be done. Also it brings relief in cases of ulcerative colitis, with fissuring in the anal canal and irritation of the perianal skin. The patient may apply the jelly, cream or solution himself, including the spray, by use of a DeVilbiss, No. 40 atomizer.

Tronothane has been used successfully on several patients sensitive to the "caine" drugs, and in circumstances in which cross sensitivity might be a danger. Later one may use any of the injection anesthetics such as procaine without possibility of cross sensitization. This is due to the fact that Tronothane is never used by injection.

Morrow, R. L., *Missouri Med.*, 9:705-706, 1955.

New... *and a Major Advance in Treatment of*

ASTHMA

MEDIHALER™

Fully effective nebulization with your favorite bronchodilator*

A plastic case; little larger than a package of cigarettes, contains Medihaler Oral Adapter and medication* (in shatterproof, spillproof vial).

nsert valve of medi-cation vial snugly into Adapter.

Hold as shown, close lips around Adapter, and inhale while pressing vial down against Adapter.

Package is conveniently carried in pocket or purse. Inconspicuous, notably safe, dependable.

Simple to administer to children. Uniform dose, no spilling, no glass to break.

•

One or two applications abort most attacks. Rarely is more required.

UNIFORM DOSAGE

SELF POWERED

ECONOMICAL

a) Unbreakable Adapter
b) No Medication Loss Spillage or Oxidation

UNIFORM PARTICLE SIZE

80% between ½ and 4 microns radius

•

***MEDIHALER-EPI**

0.5% solution of epinephrine HCl U.S.P.

***MEDIHALER-ISO**

0.25% solution of isoproterenol HCl U.S.P.

follow this simple form of Rx

Riker
LOS ANGELES

Rx Medihaler-Iso and Medihaler Oral Adapter

ANOTHER RIKER FIRST

Gastroenterology in General Practice

Careful, extensive examination of the patient is the first requisite; indications that help determine what further examination or test is required

J. T. HOWARD, M.D., *Baltimore, Maryland*

The history should be the first, and often is the best diagnostic tool. The patient should be permitted to tell his own story in his own way; and usually an inquiry should be made as to his opinion of the cause of symptoms. In the family history, in the past medical history, and in the social history, a good estimate may be obtained of the patient's intelligence and his ability to withstand discomforts.

Particular attention should be given to dysphagia, especially when accompanied by regurgitation or vomiting. Appendicitis is essentially an acute disease with leukocytosis. Lower right quadrant pain without a history of acute attacks probably is not appendicitis. Mild ulcerative colitis does not always show gross blood in the stools, but microscopic pus is always found in the feces. Mucus in the stools in quantity, with no passage of gross blood, usually signifies little more than an irritable (spastic) colon.

Give *serious consideration* to all gastrointestinal tract bleeding. The source may be very difficult to locate, but it should be tracked down, because later its cure may be impossible. If the source of the bleeding is not located, the patient should be kept under observation for several months. The first point in the diagnosis of pancreatic neoplasm or of pancreatitis is to keep these condi-

tions in mind. Pain in the upper abdomen, especially in the upper left quadrant, may mean pancreatic cancer.

Inspect the whole patient. An estimate of hemoglobin should be made from the color of palms, nail beds, ears or mucous membranes. Always look for jaundice. Look at the tongue when deficiency syndromes are suspected; pellagra still infrequently occurs. Note the dental situation chiefly for the patient's ability to masticate his food. Dental deficiencies rarely produce digestive symptoms, nevertheless, some attention should be given to the grinding surfaces.

Go over the abdomen gently before bearing down. Then attempt to palpate the solid organs and masses. A spastic colon, even in its transverse portion, is frequently palpable. When a patient is vomiting after an operation, a succussion splash is a sign that gastric aspiration is in order.

Percussion of the abdomen, except in suspected ascites, does not appear to be significant. Listening to the abdominal sounds is often not helpful.

Inspection of the anus and digital rectal examination are always in order. Your judgment will tell you when to make a vaginal examination.

LABORATORY TESTS AND PROCTOSCOPIC EXAMINATIONS

Proctoscopic examinations should be made almost routinely. A proximally lighted Kelly-type proctoscope, 8 inches in length and ½ inch calibre is advisable. Usually patients assume the knee-chest position. A very high percentage of tumors are in the lowermost bowel where they can be palpated or inspected. Most ulcerative colitis of the non-specific type begins in the rectum where the mucosal changes can be seen.

Laboratory tests should be made only when they are really indicated. The examination of the stool is simple and important. Inspect the feces grossly and test for the presence of occult blood. Look at the liquid stool microscopically without centrifugalization if the presence of pus is suspected.

BENZIDINE TESTS

A negative benzidine test practically excludes gross ulceration anywhere in the food canal. Stool the size of a pea on a slide, with a solution of benzidine base in glacial acetic acid, a few drops of hydrogen peroxide, color noted for 30 seconds. Green or blue color immediately is 4 plus; if very strong, but delayd a few seconds,—3 plus; moderate and slow 2 plus; still weaker 1 plus trace, and slight trace. Positive tests are significant *only* if bleeding gums, nose bleeds, and hemorrhoidal oozing can be ruled out *and* the patient has been on a meat-free, broth-free, and meat-gravy-free diet for four days. Hemorrhoidal bleeding can be excluded fairly well by obtaining a bit of stool through the proctoscope from above the pile-bearing area.

Examine the gastric content if desired, but don't explain gastric symptoms on the results of gastric gavage alone.

A small x-ray unit should be used for making films of the chest and for fractures. X-ray examination of the gastrointestinal tube and of the gallbladder is simple in principle, but training and experience are essential. Reserve x-ray exam-

inations of esophagus, stomach duodenum and colon for patients who have had unexplained bleeding from the gastrointestinal tube; for those with dysphagia, for those with chronic dyspepsia; for elderly patients with short histories of abdominal symptoms or a recent change in their bowel habits; and for those patients with obscure anemias. A persistently positive benzidine test on the stool *when the diet is controlled* may be an indication for an x-ray study, especially if abdominal symptoms are present. Belching does not always call for cholecystograms, but upper abdominal dyspepsia with pain which doesn't respond to antacids, antispasmodics and diet may make such an x-ray study necessary. For people who vomit a good deal, have x-ray studies made before too long a time has elapsed.

It is not difficult to determine when tests of hepatic function, pancreatic ferments in the blood and in the duodenal juice, etc., are needed. A working diagnosis should be made first. The textbooks will give you the treatment. When your patients fail to do well, and you have convinced yourself that they have something really wrong, don't hesitate to ask your colleagues for assistance.

Maryland M. J., 4:156,1955

Gastro-Intestinal Ulceration and Non-ulcerative Dyspepsia

In an urban general practice, patients with peptic ulcer were closely investigated over a period of twenty years. The records of these 323 patients yield figures showing a prevalence of incidence at one date, August, 1953.

The prevalence of peptic ulcer (4.7% of practice) was high, particularly high in the age group 45-59 years, one out of ten patients being a sufferer; for males in the same age group, nearly one out of every six in the practice was a peptic ulcer sufferer, mainly with a duodenal ulcer.

In a large number of cases in the series, symptoms had persisted for many months, often years, before the patient came for consultation. Physicians should recognize that when patients complain to them of persistent dyspeptic symptoms, the majority may have already reached the stage when an organic lesion is diagnosable.

The Gregersen Slide Test has been found valuable in the diagnosis, not only of peptic ulcer, but also of cancer. The large number and variety of other alimentary disorders which might have long escaped diagnosis, if a finding of occult blood had not prompted further investigation, is impressive. In view of the sometimes vague and protean manifestations of gastrointestinal ulceration, it seems reasonable that every patient who develops symptoms of dyspepsia, anemia, or other illness of obscure origin should have the benefit of screening for occult blood.

It is surprising how little time is demanded by these patients. In a one-month period (mid-November to mid-December, 1953)—usually a season of high symptom incidence—only 16 (6.4%) of the peptic ulcer cases and 7 (5%) of the non-ulcer dyspepsias required treatment.

Lipetz, S., et al., *Brit. M.J.*, 4932:172-177, 1955.

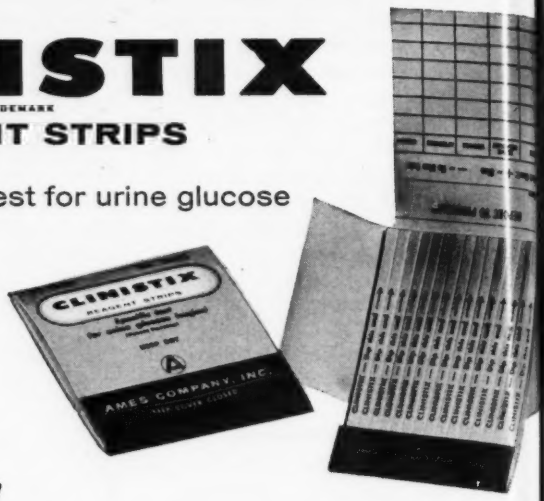
NEW CONCEPT IN URINE-SUGAR TESTING

CLINISTIX

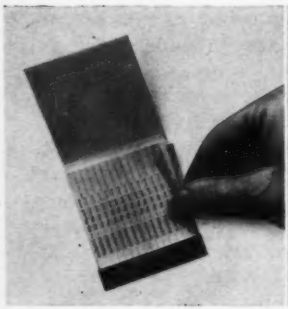
TRADEMARK

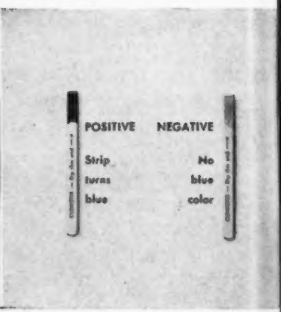
REAGENT STRIPS

specific enzyme test for urine glucose



just dip and read





complete specificity... unaffected by non-glucose reducing substances... differentiates glucose from other urine-sugars... thousands of tests reveal no substance causing a false positive.

extreme sensitivity... detects glucose concentrations of 0.1% or less.

utmost simplicity and convenience... a CLINISTIX Reagent Strip moistened with urine turns blue when glucose is present.

qualitative accuracy... used whenever presence or absence of glucose must be determined rapidly and frequently. CLINISTIX does not attempt to give quantitative results because so many factors in urine influence enzyme reactions.

economy... CLINISTIX saves time and cuts costs... each strip is a complete test rapidly performed without reagents and equipment.

available: Packets of 30 CLINISTIX Reagent Strips in cartons of 12—No. 2830.

AMES COMPANY, INC • **ELKHART, INDIANA**

Ames Company of Canada, Ltd., Toronto

Meticorten in Rheumatoid Arthritis and Allied Conditions

Intractable cases were selected for this study, and in most of these patients the disease was advanced; the response to this therapy was encouraging

JOHN W. GRAY, M.D. and EVELYN Z. MERRICK, M.D.,
Orange, New Jersey

Observations were made of 57 patients: 44 of whom had rheumatoid arthritis, 3 had rheumatoid spondylitis and 10 patients who had nonrheumatoid disorders.

In most of the cases in the rheumatoid group, the disease was advanced. The patients ranged in age from 31 to 64 years, and the duration of disease was 1 to 29 years. All but three had formerly received cortisone, hydrocortisone or ACTH. Intractable cases were intentionally selected, i.e., those having responded unsatisfactorily to previous treatment, or who had undesirable reactions to cortisone or its analogues.

Smaller doses of Meticorten were often as effective as larger ones. Most of these patients were started on 20 mg. daily. The dosage schedules most successful were as follows: If the total daily requirement was 30 mg., we gave 5 mg. every 3 hours during the day; if 25 mg., 5 mg. every 4 hours during the day; if 20 mg., 5 mg. p.c. and h.s.; and if 10 mg. (maintenance), 5 mg. after breakfast and 5 mg. after the evening meal. Size of dose and rate of increase or reduction depended on the patient's experience with steroid therapy, general physical status and manner of response to Meticorten.

When the "splinting" inflammation is rapidly absorbed around joints, there is danger of increased subluxation unless the joints are supported until atrophic muscles can be strengthened.

Among the 44 rheumatoid arthritis cases, in only one instance was Meticorten therapy a complete failure.

The patients reported a feeling of well-being 24 hours after Meticorten was started. Pain and stiffness were first relieved over a period of one to seven days; in the early cases reduction of swelling and tenderness disappeared within a week; in the chronic ones, in two to four weeks. In one case, complete reversal required 70 days.

Maintenance doses of Meticorten have been much more effective than safe doses of cortisone. It is too early to know how lasting its beneficial effects will be or whether or not its prolonged use may ultimately produce "Meticorten fastness."

In the three cases of rheumatoid spondylitis, pain was relieved. Postural improvement was noted in the two patients with fibrous ankylosis. There was no improvement in the one with bony ankylosis.

From marked lateral deformity, present for fifteen years, there was moderate improvement following cortisone and physical therapy; an orthopedist stated nothing more could be done. After seven days of Meticorten therapy, the head was held erect and could be moved in all directions with little resistance and no pain.

A case of bursitis required opiates for months. Cortisone and Novocain plus Hydrocortisone injections had been entirely ineffective. The patient was unable to work and could not sleep. After he took 4 or 5 Meticorten tablets he came in almost "dancing." Complete relief was obtained in ten days, enabling the patient to return to work; no change two months later. Any reactions disappear in many cases as the drug is reduced, in some cases even when the dose is not altered.

Increased appetite, insomnia, gastric disturbances, mild euphoria, facial rounding, palpitation, weakness, sweating, hirsutism and depression have occurred in that order. Body weight tends to be steady or to show a slight decrease, in contradistinction to cortisone. No impairment of water balance. Urination is increased the first seven to ten days in both frequency and volume.

The reactions which were most troublesome were palpitation, breathlessnes and precordial oppression. Only one cardiac reaction in our group was severe enough to stop treatment. The steroid was temporarily discontinued in three cases of indigestion.

SUMMARY

Meticorten is more effective in the treatment of inflammatory arthritic and allied conditions than cortisone and its analogues. The response is more rapid, the effect is more prolonged between doses and maintenance is better with small doses. Meticorten is a more potent anti-inflammatory agent; there is complete reversal of residual as well as active periarticular swellings. Side effects are infrequent and minor.

Further observations are required in order to determine the ultimate effect of prolonged administration of this steroid.

Geriatrics, 5:337-344, 1955.

Glaucoma as Seen by the General Practitioner

Most blindness occurs because glaucoma was not recognized; early symptoms are elusive and differential diagnosis is difficult

EDGAR W. BOOTH, M.D., *Shreveport, Louisiana*

A million persons over forty years of age have glaucoma. In this age group, 40,000 new cases occur each year. Twelve per cent of all blindness is due to glaucoma.

Primary congestive glaucoma may be acute or chronic. The chronic form is characterized by recurrent attacks of elevated intraocular pressure which may be transient at first and slowly increase in severity and duration. The patient may or may not complain of blurred vision or of halos around lights. Mild recurrent headache may be the symptom which brings him to the physician. Question the patient who complains of recurrent headaches as to halos or diminished vision. It is surprising how poor the vision can become without the patient being aware of it. If the patient is in a congestive phase, there will be photopsia, blurred vision and injection of the conjunctiva. Unless you keep glaucoma in mind, the headache may be confused with one of vascular origin. There may be a history of attack precipitated by exposure to darkness, or when the patient was mentally upset. The attack may wake the patient out of a sound sleep.

Symptoms of the acute phase are the same, but much more pronounced and accompanied by nausea and vomiting, chills and bradycardia. The anterior chamber will be shallow, cornea hazy, pupil dilated, iris

muddy, and the eye hard to palpation. The disk may be reddened but will not be excavated unless this phase or a chronic simple glaucoma has persisted for some time. Frequently the fundus cannot be seen due to the cloudy cornea. The patient may be so ill that he considers eye pain a minor part of his illness and does not call attention to the eye. Glaucoma may be mistaken for an acute gastrointestinal disturbance. In acute congestive glaucoma, each hour of delay means more loss of vision.

Any patient who relates a history of recurrent attacks of eye or head pain, with or without blurred vision or halos, should be referred to an ophthalmologist.

CHRONIC SIMPLE GLAUCOMA

There is frequently a lack of identifying symptoms. Usually intraocular pressure rises slowly to a slightly higher level, and the eye compensates at this level. This is repeated, each time the tension reaching a slightly higher level. The only early symptoms are an occasional complaint of colored rings around lights. In the later stages, there may be early morning headaches which disappear on rising. Television or movies frequently produce headaches. There may be a complaint of many changes of glasses or one of trouble adjusting the eyes to darkness. Still later there will be foggy vision, frontal headaches and halos. About this time, the physician may be seen by the patient because of the headaches.

Many patients will only give a history of headache when questioned. Foggy vision or halos may not be present, and the patient will still be losing his sight from glaucoma. On the other hand he could have any or all these symptoms and not have glaucoma. Glaucoma occurs much more frequently after forty, the same age period when presbyopia begins. Glaucoma simplex is often confused with cataract because of the loss of vision and the slight grayish haze of the lens which is seen through the slightly dilated pupil. In the simple type, symptoms are mild and vague until the advanced stage.

There is induced glaucoma initiated by drugs, such as banthine, atropine, belladonna, etc. If during a course of one of these drugs the patient complains of blurred vision, loss of accommodation or any pain in the eyes, examine for glaucoma. This patient should be followed for development of a subsequent glaucoma.

INFANTILE GLAUCOMA

This is a rare hereditary condition; 90% of the cases appear by the third year; it is due to congenital defect in the angle, and there is increase in size of the globe.

When treating an eye for trauma, inflammation or iritis, and it does not respond, secondary glaucoma must be considered. Patients who have gross cataracts and who present themselves with an injected painful eye may have *both* a cataract and glaucoma.

When the nerve fiber layer is thinned out to the disk border above or below, it is not a physiological cup. Normally the nerve fiber layer is pink—evaluate color strictly on the intensity of pinkness on the nasal side of the nerve head.

Most blindness occurs because glaucoma was not recognized.

J. Louisiana State Med. Soc., 1:15-18, 1955.

Emergency Treatment of the Injured

Improper care after the injury has caused severe additional damage; common faults are stressed as well as the correct definitive treatment

PETER B. WRIGHT, M.D., *Augusta, Georgia*

After adequate emergency attention, the patient must be transported to hospital or home. Properly equipped ambulances with trained attendants are essential. Rarely is it necessary for an ambulance to speed; fatal accidents often result from this error. Removal of the injured from wrecks must be done expertly and not with haste. The spinal cord has in some cases been transected by forcefully pulling a patient from a wrecked automobile when the primary injury was a fractured spine with no paralysis.

Pressure dressings will usually control bleeding. More deaths have resulted from unnecessary and improper application of tourniquets than from failure to apply them; only when the tourniquet is the last resort should it be used.

In shock, an immediate drop in blood pressure (less than 100), pulse rate 100 or more, cold extremities, pallor, clammy skin and collapse usually mean that 30% or more of the circulating blood volume has been lost. Give plasma expanders until whole blood is available. These symptoms occuring six to eight hours after injury, still mean loss of blood and are not due to a nervous reaction or infection. With closed fracture of a femur, the average loss of blood from the vascular tree is 800 to 1,200 cc.

Pain must be relieved if shock is

profound; intravenous administrations must be used, as the sluggish capillary circulation cannot deliver the drug.

SHOCK

Conditions which may produce the signs and symptoms of shock when there has been *no* loss of blood are: cranial trauma (cerebral), cardiac tamponade and respiratory embarrassment arising from multiple rib fractures, pneumothorax, sucking wounds of the chest, obstructed airway and other causes, all of which must be watched for and treated according to the requirements.

Open wounds should be covered with sterile gauze and a pressure dressing to control bleeding. No narcotic drug should be given. A patent airway must be assured and oxygen supplied if there is evidence that it is needed. Place in a prone position with foot of the stretcher elevated.

Chest injuries resulting from nonpenetrating wounds from a blow, with no laceration of the skin, may cause serious injury to the lungs, heart and great vessels, or even to the esophagus. Give narcotics for relief of severe pain. Air passages patent and oxygen if necessary. Penetrating wounds or sucking wounds should be covered with vaseline gauze and treated in the same manner. Perforating wounds—remember that two wounds may be requiring attention. Loss of the ability to cough may result in obstruction of the bronchial tree. This can best be controlled by Novocain blocking of the intercostal nerves, which relieves the pain of coughing. Use narcotics with extreme caution.

In abdominal injuries, the penetrating instrument will usually reveal the course and clue to organs which have been damaged. Place pressure binder over sterile dressings in order to control hemorrhage. Nonpenetrating wounds are dangerous and hard to diagnose—no narcotics, close observation and an ever-ready operating room are required.

With fracture of the pelvis, injury of bladder or urethra is common. Urinary injury takes precedence over the fracture and requires immediate attention. The full bladder is more vulnerable to trauma than the empty; frequent stops should be made at rest stations. If a voided specimen is not obtainable, catheterize.

SPINAL CORD DAMAGE

An accurate history of spine injuries is most important. A flexion or jack-knife injury will result in a compression fracture of the vertebral bodies and the anterior longitudinal ligament will be intact. Lifting the patient in the supine position flexes the spine and may result in serious damage to the spinal cord. Lifting the patient in the prone position is not only safe but beneficial. On the ambulance stretcher, with the patient in the prone position, the head may be elevated to produce hyperextension. On the bed, a pillow should be placed under the back, in the supine position, to maintain hyperextension. Sagging into a flexed position should not be allowed even momentarily.

With fracture produced by hyperextension, the anterior longitudinal ligament may be ruptured. The safe way to handle the patient is with neither flexion nor hyperextension. The ladder splint is placed on the ground and the patient gently rolled over on it. Traction on head or lower

extremities can be accomplished on this splint.

NERVE INJURIES

In cases of upper extremity injuries, a rapidly developing hematoma is arterial bleeding which requires immediate attention, while a slowly developing hematoma is of venous origin and is not usually serious. The circulation below the site of the injury should be examined in every case. Determination of nerve injury is necessary because if the limb is splinted without this information, it may be impossible to say whether the injury or handling or the splint caused the nerve damage.

If the ulnar nerve is severed, complete anesthesia of the fifth finger. In median nerve injury, anesthesia of the tips of the second and third fingers. Injury to radial nerve produces anesthesia of the thenar region, and most often wrist drop. Angulation, if not corrected, will cause pressure on a blood vessel or nerve. The long controllable fragment must be aligned with the uncontrollable fragment.

Fractures of the humerus should be splinted for transportation. The Thomas arm splint is ideal for this purpose and allows for traction which is often indicated. Subfascial hemorrhage may produce enough pressure to cause ischemia of the muscles resulting in ischemic (Volkmann's) contracture. Subfascial tension must be relieved. There are two types of supracondylar fracture of the humerus. The flexion type is usually suffered by adults and offers little threat to the brachial artery. The hyperextension type is frequent in children and produces a real threat to the brachial artery. If the elbow is flexed before the fracture is reduced, irreparable damage can result. The circulation in the wrist and finger tips must be studied. Immediate surgical intervention is mandatory if closed manipulation does not restore the circulation.

In femoral neck and trochanteric fractures, the limb is externally rotated, and for transportation the limbs may be bound together with the toes pointing up, the patient supine. Fractures of the shaft must be splinted for transportation. The Thomas leg splint is excellent and provides for traction and countertraction. In supracondylar fractures, if the limb is splinted with the knee in full extension, the popliteal artery will be compressed, perforated or torn. A pillow keeping the knee in moderate flexion will eliminate the hazard. Fracture dislocation of the ankle (Pott's fracture) will frequently obstruct the circulation. Reduce the deformity before splinting, even without an anesthetic.

For burns, simply cover the burned area with sterile dressings to exclude air and for protection. No grease, ointment or local medication should be used.

CONCLUSIONS

Impressions made upon a patient in the primary stages of treatment are lasting. We can gain his confidence and lasting gratitude by being prompt, efficient and kind while administering first aid at the scene of the accident, in the course of transportation, in the emergency room and during definitive treatment. A mentally depressed trauma patient is most difficult to rehabilitate.

J. Florida M. A., 3:183-187, 1955.

Acute Abdominal Disease

Signs and symptoms that will assist the physician in establishing the diagnosis; many conditions may mimic acute appendicities

PHILIP THOREK, M.D., *Chicago, Illinois*

Acute appendicitis does not produce right rectus rigidity. It is impossible to contract one rectus muscle without contracting the other. Only if an underlying mass is present is it possible for one rectus to feel rigid. When both recti react to pressure, this is muscular defense and not rectus rigidity.

Bidigital examination (one finger in the vagina and one in the anal orifice) whenever possible is preferable to rectal or bimanual examinations. The examiner is oriented immediately and does not confuse cervix, feces, adnexae or appendiceal masses. Conservative surgeons advocate conservative therapy in the late or neglected case. Children should be operated upon whenever the condition is diagnosed.

Although peptic ulcer is becoming more frequent in females, it still affects the male more frequently. The sudden onset of agonizing pain with board-like rigidity and shock are well known. Abdominal auscultation is of value; as the peritoneal soiling spreads, the intestinal sounds diminish. The demonstration of pneumoperitoneum helps to make the diagnosis. The forme fruste ulcer is a pin-point perforation which immediately seals and prevents spillage into the peritoneal cavity. The signs and symptoms are lacking; an accurate history and examination will establish the diagnosis.

Duodenal or gastric contents may leak along the paracolic gutter and pool around the appendix, causing unnecessary removal of a red but innocuous appendix. Treatment is early closure of the perforation. Conservative treatment is reserved for cases seen 24 hours post-perforation.

The pain of acute cholecystitis may be constant because of continuous pressure upon nerve endings or colicky when there is obstruction. Operation in an obstructed condition is mandatory. Gallbladder pain radiates to the tip of the right scapula or the interscapular area. Any pain that radiates to the shoulder suggests an irritation of the phrenic nerve, usually by subphrenic peritonitis.

Tenderness in acute cholecystitis is usually close to the right costal arch. Tenderness at a lower level can only be considered to be due to gallbladder disease if the normal tympany to percussion in the right quadrant is replaced by flatness.

It is better to permit the acute inflammation to subside and then do a cholecystectomy. If the pulse rises 20 beats within an hour and continues to rise, this warrants surgical intervention.

Acute salpingitis appears immediately before, during or immediately after the menstrual period. Tenderness is usually bilateral and suprasymphyseal. Bimanual and bidigital examinations will reveal marked tenderness on moving the cervix, swollen tender tubes or adnexal masses. A positive smear (cervical or urethral) helps to "rule in," but a negative smear does not "rule out," salpingitis.

A milder form is acute edematous pancreatitis; in the severe hemorrhagic (necrotizing) type, shock is present. Tenderness is diffuse and the rigidity is often board-like. A particular type of pain may be present, aggravated when the patient is on his back and relieved when he assumes a sitting or upright posture. Whenever a patient with an acute abdominal condition prefers sitting, a pancreatic lesion must be the first consideration. The serum amylase test given within the first 72 hours is helpful. Morphine may elevate the serum amylase reading.

The use of nasogastric siphonage is of particular help. By keeping the stomach empty and aspirating the HCl, the duodenal mucosa is not stimulated to secrete secretin, and this, in turn, diminishes pancreatic activity. If the diagnosis is certain, it is far better to reserve surgical intervention for any complications.

Besides an opaque calculus, microscopic thrombi, uratic debris and a ptosed kidney might also produce such pain as that of renal colic. The typical pain is in the right loin with radiation downward along the course of the ureter and to the inner aspect of the thigh or genitalia. Acute abdominal pain and a bradycardia is a renal or ureteral colic until proved otherwise.

To open an abdomen in the presence of an acute coronary attack is to court disaster. Any pain anywhere in the body which is precipitated by exertion or emotion (pleasant or unpleasant) and relieved by nitrites is coronary disease. That such pain may be referred to the abdomen, particularly the epigastrium, is well known. Such patients, if carefully examined, will fail to show rectus muscle defense, particularly if such contraction is sought for at the end of inspiration.

Missouri Med., 6:419-422, 1955.

Procedures Following Rescue from Drowning

Most important is uninterrupted and prompt artificial respiration; more research is needed in regard to the physiology of drowning

K. W. DONALD, M.D., *Birmingham, England*

When an animal is totally immersed in fresh water, there is an initial period of struggling and apnea. From one to two minutes after submersion, an involuntary inspiration occurs and water is drawn into the lungs, usually in large quantities. In some cases glottic spasm will prevent the lungs from being immediately flooded. When fresh water enters the lungs, there is an immediate and enormous absorption of this fluid into the circulation. It has been shown that an amount of water equivalent to 60-150% of the blood volume can enter the circulation in a few minutes.

Hemodilution causes hemolysis, and large quantities of free hemoglobin appear in the plasma. Since K is released when erythrocytes are lysed, there is a considerable gain in plasma K from this source, with a rise due to severe anoxemia with the result that the K/Na ratio is greatly increased. This disturbance of electrolyte ratios is more dangerous than overall changes in tonicity. The coronary circulation receives this highly abnormal blood, and the myocardium is exposed to serious biochemical insult as well as extreme anoxia. In a few minutes ventricular fibrillation begins. The great overloading of the circulation probably contributes to this event.

Swann et al. surmise from data reviewed that only one in twenty

men drown in fresh water with no significant water in the lungs or blood dilution. In salt-water drowning the electrolyte concentration of the inhaled fluid is greater than that of blood, so there is considerable movement of water from the circulating blood into the lungs, but no hemolysis or disturbance of the K/Na ratio.. Ventricular fibrillation does not occur, and the heart action fails gradually in 5 to 8 minutes (in dogs). The heart failure in salt-water drowning is almost certainly due to prolonged and severe myocardial anoxia.

It is obvious that, unless respiratory failure occurs before irreversible circulatory failure, the giving of artificial respiration will be useless in such cases.

AFTER-EFFECTS

In a careful review of medical literature only five clinical reports (12 cases), on the after-effects of near drowning have been found. There are no doubt a few others, but considering that drowning is about the third commonest cause of accidental death, this is a surprising finding.

If a victim has flooded his lungs with fresh water and yet has been successfully resuscitated, it would appear certain that he would be suffering from plethora, hemodilution, electrolyte disturbance, and pulmonary edema. He would also be in danger of severe renal damage from the presence of freely circulating hemoglobin. Substitution bleeding with electrolyte correction, treatment for acute kidney damage, and oxygen therapy for pulmonary edema and lung flooding would seem to be indicated. Hypotonic saline and oxygen therapy may assist those saved from salt-water drowning.

The almost complete absence from clinical reports, of patients requiring and receiving such treatment, in the vast medical literature of today can hardly be due to a deliberate silence on this subject. It is difficult to avoid the sinister interpretation that such syndromes probably do not exist, and that aspiration of any marked quantity of water into the lungs is fatal.

The findings suggest that submersion in fresh water is far more lethal than in salt water, yet reliable figures are lacking.

ARTIFICIAL RESPIRATION

The Holger Nielsen method of artificial respiration is now officially recommended. .The victim is in the prone position with the head to one side. This usually ensures a good airway. It is a "pushpull" method, and not only is pressure applied to the upper chest to induce expiration, but the arms are also lifted to induce inspiration. The advantages of this method are the increased efficiency of pulmonary ventilation and the lack of pressure on the abdomen with the risk of further inhalation of regurgitated water. There are even more vigorous and effective "push-pull" methods, such as the hip-lifting technique—which, although hard work, can be maintained for several minutes, during which the issue is usually decided one way or the other. Medical men and persons who may be called upon to carry out resuscitation should know these more vigorous methods of artificial respiration.

The efficacy of drainage is now regarded as most uncertain, the overriding consideration is the need for

immediate use of artificial respiration, which in itself may help to clear the passages of water more effectively than mere gravity. Although a number of modern first-aid manuals still recommend drainage before artificial respiration, Dr. R. Jackson wrote in 1746: "The practice of hanging by the heels is not only useless but must also contribute to destroy those remains of life which may possibly be lost," and added, "a single moment often determines between a state of death and life."

Manual ventilation is as efficient as any portable mechanical apparatus. Even though the apparatus may be brought to the subject, it is distracting, and the issue is being decided already. Oxygen therapy is invaluable, but it is rarely available in the first few minutes. It should always be given as soon as possible, provided the preparation of the apparatus and its application does not in any way interfere with unremitting artificial respiration. The covering of the victim and the use of hot-water bottles are procedures which are unlikely to have any effect on the issue of life and death.

When a drowned person is rescued, artificial respiration must be begun as soon as he is taken from the water and continued without interruption for at least 15 minutes. All other procedures and considerations, such as postural drainage, examination, or administration of oxygen or drugs, must be considered secondary. They should be used only if they do not interfere in any way with immediate, efficient and unremitting artificial respiration. The airway must be watched, but this should be considered after artificial respiration has been started. Elaborate procedures of any sort that delay artificial respiration will gravely threaten the chance of survival. Usually a physician arrives on the scene after the issue has been decided. He must never stop the administration of artificial respiration to examine the patient in the first fifteen minutes, unless obvious recovery has occurred.

The main contribution that the medical profession can make to this problem is the initiation of more active research into the physiology of drowning and the efficacy of various methods of resuscitation. The publication of observations made on persons resuscitated from drowning who have been studied and treated by physicians would also be of great value.

Brit. M.J., 4932:155-160, 1955.

Antihistaminics as Substitutes for Barbiturates

Barbiturates can successfully be substituted by high-potency antihistaminics in certain medical disorders in which insomnia is predominant; a single full daily dose before retiring.

Rauwolfia preparations, aside from their antihypertensive qualities, possess also a general sedative action, potentiate the action of the soporific drugs, and under their effect barbiturates, as well as antihistaminics, can be reduced in dosage and eventually discontinued.

Galambos, A., *New York State J. Med.*, 55:663-667, 1955.

RECTAL DESITIN® OINTMENT

NEW and specially formulated for more effective and sustained relief in

anorectal conditions

RECTAL DESITIN OINTMENT affords unusually effective relief from pain, irritation, inflammation, itching, congestion, and discomfort in non-surgical hemorrhoids, anorectal irritation, pruritus, uncomplicated fissures, proctitis, inflammatory cryptitis, papillitis and perianal dermatitis.

Outstanding Advantages: (1) a special tacky consistency for prolonged efficacy. (2) a unique wetting agent for intimate, thorough coverage. (3) Norwegian cod liver oil to stimulate healing.

Formula: RECTAL DESITIN OINTMENT contains high grade Norwegian cod liver oil, zinc oxide, lanolin, talcum, sodium lauryl sulfate, petrolatum q.s. Does *not* contain local anesthetics, narcotics, or "caine" drugs which might mask serious anorectal disorders.

Available on your prescription in tubes of 1½ oz., with a safe, flexible applicator.

Liberal **sample** supply on request.

DESITIN CHEMICAL COMPANY
Providence, R. I.

New RECTAL DESITIN OINTMENT is not to be confused with regular DESITIN OINTMENT.

Treatment of Intractable Pain with Large Doses of Morphine and Diamino-Phenylthiazole

With this combination it is possible to give the patient the benefit of larger doses of morphine without the hazard of respiratory depression

F. H. SHAW, M.Sc., PH.D. and A. SHULMAN, M.B., B.Sc.
Melbourne, Australia

The only substances known to be active in combating the respiratory depressant effect of morphine have been N-allylnormorphine (Lethidrone, Nalorphine, Nalline) and, more recently, Levallorphan. No satisfactory clinical combination has been found that, in adequate therapeutic doses, does not produce some toxic effect.

This paper discusses the clinical use in 35 cases of a morphine antagonist — 2:4-diamino-5-phenylthiazole hydrobromide (D.A.P.T.). In therapeutic doses this has little effect on the analgesic properties of morphine, but it reveals marked and lasting antagonism to its respiratory depressant effect and thus renders the clinical use of large doses of morphine a safe procedure.

First it is essential to discard the concept that morphine is a dangerous drug. It is recommended that the practice of administration of small doses of morphine at frequent intervals should be abandoned. One should aim at 1 to 2 gr. doses of morphine, sufficient to produce an analgesia of six to eight hours, yet keeping the patient alert. These doses should be given at the initiation of

the treatment. The great psychological advantage that the patient need never suffer severe pain is strongly stressed. The principle of the treatment consists in giving gradually increasing amounts — ¼ gr. increments — of morphine accompanied by D. A. P. T. (15 mg.) over a period of one or two days until the desired analgesia is obtained. The patient will probably be receiving ¼ to ⅓ gr. (16-22 mg.) of morphine.

INJECTION INSTRUCTIONS

In the following, "treatment" means the injection of both morphine and D.A.P.T. and the subsequent observations of respiration, etc. Inject ½ gr. morphine and 15 mg. D.A.P.T., thirty minutes later—both injections intramuscularly. Observe respirations (and sedation) every 15 minutes for two hours. If pain returns in less than six hours and the respirations have not fallen below 6 to 8 a minute, repeat the "treatment" with ¾ gr. morphine and 15 mg. D.A.P.T. (observe respirations as before). If respiratory depression should cause concern, a dose of 10 mg. D.A.P.T. may be repeated at 10 minute intervals. If the pain returns under six hours and the respirations have not fallen below 6 to 8 a minute, repeat the "treatment" with 1 gr. morphine and 15 mg. of D.A.P.T. (observe respiration as before).

At this stage mild-to-moderate pain should be getting up to eight hours' relief, per "treatment," without any undue sedation. The patient is now said to be stabilized.

In cases of very severe pain, it may be necessary to give doses of morphine up to 2 gr., three or four times a day, in the following manner.

Inject 1⅓ gr. morphine and 15 mg. D.A.P.T. intramuscularly and observe respirations, etc. as before. Repeat this "treatment" when pain returns or at the end of six hours. If the analgesia is still inadequate and the respirations have not fallen below 6 to 8 a minute, give two "treatments" of 1½ gr. morphine and 15 mg. D.A.P.T. If adequate analgesia is not obtained, inject 2 gr. morphine and 15 mg. D.A.P.T. When the patient has been stabilized, usually on the second day of treatment, the intramuscular injection of D.A.P.T. is replaced by oral administration. D.A.P.T. is given at the same time as the morphine injection. If the patient is unduly sedated during the day, the oral dose of D.A.P.T. may be increased up to 30 or 40 mg., and reduced to 20 mg. at night.

RESPIRATION DIFFICULTIES

Slow and irregular breathing is not a sign of respiratory danger if respirations are deep and cyanosis is not present. Under these conditions a rate as slow as six a minute is not dangerous. If at any time the respiration should fall below 6 to 8 or the breathing is shallow, with cyanosis, further intramuscular injections of 10 mg. of D.A.P.T. may be made at 10 minute intervals until 60 mg. of D.A.P.T. has been given. It must be stressed that D.A.P.T. will increase the depth rather than the rate of respiration. For more rapid action, the D.A.P.T. may be injected intravenously.

It is better to give four treatments a day rather than three if pain tends to recur at about seven hours.

Care should always be exercised in the treatment of the aged. At night it is desirable to give a bar-

bitarate cover or an injection of hyoscine—1/150 to 1/100 gr.

If sufficient relief is not received from over 1 gr. of morphine, it is safe to repeat the injection (with D.A.P.T.) at any time after two hours.

Special mention is made of the apparent ability of D.A.P.T. to prevent or delay the onset of tolerance.

The slow intravenous administration (20 minutes) of 1 gr. of morphine sulphate with 1/150 gr. hyoscine hydrobromide exerts its maximum clinical effect within 20 minutes. Given intramuscularly, the full effect is not exerted for 40 minutes.

The slow intravenous or intramuscular administration of 1 gr. morphine sulphate and 1/150 gr. hyoscine hydrobromide usually has little depressant effect on the blood pressure or pulse rate. An occasional fall in the systolic pressure of 5 to 15 mm., with a transient pallor and a subjective feeling of cold, is sometimes observed, but this is quickly followed by a warm, flushed and slightly sweaty skin with a return to normal blood pressure and a subjective feeling of warmth.

In addition to the extensive series of cases given above, D.A.P.T. has been used in a few cases of neonatal asphyxia, in methadone hydrochloride poisoning, and for the relief of post-operative pain. In the last-mentioned example, the ability of the patient to cough painlessly was important. It should now be possible to use larger doses of morphine preoperatively in conjunction with D.A.P.T., perhaps by intravenous administration. Finally, the removal of the risk of respiratory depression due to morphine should lead to an extension of this drug's use in the fields where it is already of value—shock, coronary occlusion, obstetrics, etc.—and it may open new fields in anesthesia.

Brit. M.J., 4926:1367-1369, 1955.

Penicillin Best Against Strep. Hemolyticus

Strep. hemolyticus is extremely sensitive to penicillin, also to chlortetracycline. The treatment of streptococcic tonsillitis, otitis, etc., with chlortetracycline has thus produced good results. After the completion of treatment, though, the streptococci return in a greater number than after penicillin.

Three concurrent series, each comprising 105 initially uncomplicated cases of scarlatina, were treated with penicillin, chlortetracycline, and a combination of the two, respectively. No difference was found in the clinical course between the three series, judging by the duration of the fever and the course of the S. R. The complications were likewise quite insignificant in all series, but their frequency and nature with chlortetracycline treatment and, in particular, with chlortetracycline in combination with penicillin, gave rather poorer results than with penicillin alone.

In patients treated with chlortetracycline or with chlortetracycline in combination with penicillin, the streptococci, 3 weeks after discharge, had returned to a far higher degree than following penicillin treatment.

Strom, J., *Antibiotic Med.*, 1:6-11, 1955.

Cardiac Pain

Cardinal symptoms that distinguish the various types of coronary disorders, premonitory pains and the methods used to obtain relief

ROBERT S. DYER, M.D., F.A.C.P., *Louisville, Kentucky*

Many pains of other origin mimic cardiac pain, e.g., pains of esophageal spasm, hiatal hernia, gastric lesions, gallbladder disease, distention of the splenic flexure of the colon by gas or feces, spontaneous pneumothorax, mediastinal emphysema, arthritis and intervertebral disc syndrome affecting the cervical or thoracic spine.

The cardinal symptoms of neurocirculatory asthenia are chest pain, palpitation, sighing and a constant feeling of exhaustion. These symptoms make patients think that they have angina, and even some physicians make this error.

The pain of neurocirculatory asthenia is either an ache or a sharp pain. It seldom has a quality of constriction and follows exertion rather than coming during exertion.

The pain of dissecting aneurysm is more often maximum from the start, often radiating toward the back and sometimes downward.

Chest pain is the most common complaint of patients with thoracic aortic aneurysms. Dyspnea and cough are also important.

Most cases of pericarditis are entirely painless. The lowermost part of the parietal pericardium is supplied by fibers that carry the sensation of pain; involvement here or extension to mediastinal pleura causes pain—substernal, precordial, or in the left shoulder area. It is

similar to myocardial infarction, and differential diagnosis may be difficult.

Pleural pain of pericarditis may be aggravated by breathing, twisting the body or by swallowing. Fever tends to be higher and the heart size increases abruptly with effusion in pericarditis. The friction rub of pericarditis occurs much earlier and lasts longer.

Pain of rheumatic carditis is a mild precordial ache not well localized.

The principal syndromes of coronary insufficiency are angina pectoris, coronary failure, myocardial infarction, congestive heart failure, disturbances of rhythm or conduction and sudden death. Only the first three provoke pain. A patient may have coronary artery disease and never have pain or other clinical evidence.

EXCITING FACTORS

A patient with angina pectoris seldom has other complaints. It may be difficult to decide whether he is describing chest pain or discomfort in breathing. Exertion is the most common exciting factor. Eating, followed by exertion, is another; also emotion.

Getting into a cold bed, walking in the cold wind, or drinking iced drinks may provoke the pain. Angina, when it comes in a patient who is lying in bed, usually is serious. Occasionally this is due to nocturnal hypoglycemia which can be prevented. Hypoglycemia at any time of day can provoke severe angina. Other exciting factors include swallowing and the use of certain groups of muscles (sexual).

In 40% of cases, the chest pain is almost always a sense of constriction or pressure; it may rise to the level of pain. In 30% it is vague, in 20% aching and in 5% burning. The pain seldom lasts more than two minutes after cessation of physical effort.

In angina from hypoglycemia, eating affords relief. Nitroglycerine may relieve the pain, also that of fibrositis, spondylitis, neuritis, spasm in the gastrointestinal tract, biliary or renal colic or anxiety. In angina, relief is usually prompt and complete.

Belching brings relief from angina in some patients. A serious disorder may be passed off as simple indigestion.

Occasionally with myocardial infarction, the patient will point to the area of his discomfort. With angina he uses either one or both hands to indicate a large area. In 95% of cases the pain is most intense substernally or just to the left of the sternum. Myocardial infarction pain may be in the apical region.

Three out of four patients whom we suspect of having angina pectoris have some co-existing disease.

Angina pectoris is *always to be diagnosed* from the patient's story. The average life after onset is ten years. Some live many years.

CORONARY FAILURE

Coronary failure pain is similar to that of angina, distinguished mainly by a longer duration and is not relieved by nitroglycerine. Half such patients pass through a phase lasting hours, days or weeks. Pain is more frequent and more intense, with fewer precipitating factors and sometimes without effort; even during sleep. Coronary failure and myocardial infarction differ because of the absence in coronary failure of

fever, leukocytosis, fast sedimentation rate and distinctive electrocardiographic changes.

Coronary failure may be myocardial ischemia, which is reversible, or impending myocardial infarction that will develop fully within a short time. In several reports the incidence of painless attacks was 28% to 53%. In patients still living, more than 90% have chest pain. No special exciting factors are recognized except conditions that cause shock, including surgical operations.

Pain of myocardial infarction is not markedly different from angina. It is more often felt toward the apex or in the arms, although the substernal and left parasternal regions are the usual sites. The time of onset is often indistinct, building up gradually to a peak intensity. Nitroglycerine is usually ineffective; opiates are needed for relief. Objective signs —shock, fever, leukocytosis, fast sedimentation rate and ECG confirm the diagnosis.

The chances for recovery from uncomplicated infarction are 10 to 1 in favor of the patient. Features of the pain which adversely affect the outlook are long duration, strict localization to the chest and a history of premonitory pain.

It is wise to require anoxia-injury ECG patterns in addition to history before anticoagulants are started.

Kentucky M.J., 5:404-410, 1955.

Hemolytic Disease of the Newborn

A study of the previous history was made of 1,033 immunized Rh-negative mothers for the period 1947-55. The total of 1,336 babies with hemolytic disease represents an incidence of five cases for every 1,000 births. From this experience we have found that:

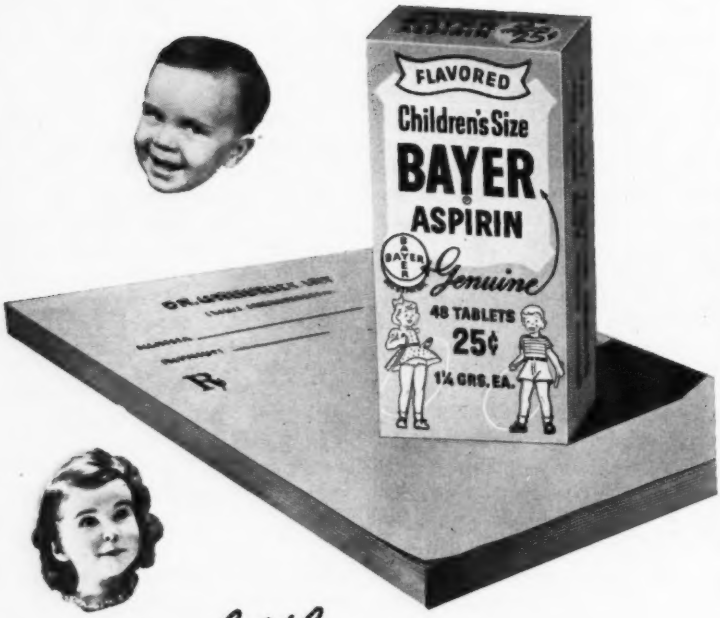
1. Immunization by Rh-positive blood transfusion is of similar significance to immunization by pregnancy.

2. Where there has been no previous affected baby, the risk of stillbirth is 10%, but of those born alive, 40% will not require treatment.

3. Although there is a trend towards more severe disease in succeeding pregnancies, this is not true in all cases. Distinct family patterns are rare, but if the previous infant was mildly affected, the risk of stillbirth is no more than 2%. Of those born alive, 60% will survive without treatment. The previous occurrence of kernicterus does not imply a more serious outlook than that of any previously affected infant requiring treatment. If a previous baby was stillborn from hemolytic disease, there is an 80% chance that the next baby, if allowed to go on to a spontaneous delivery, will also be stillborn. If born alive, it will certainly have severe disease and require treatment.

4. Immunization from an early pregnancy was only slightly more serious than immunization from a later pregnancy. The time interval between affected babies did not materially affect the prognosis.

Walker, W., et al, *Brit. M. J.*, 4960:187-193, 1956.



little

How to win friends ...

The Best Tasting Aspirin you can prescribe.

The Flavor Remains Stable down to the last tablet.

25¢ Bottle of 48 tablets (1¼ grs. each).

We will be pleased to send samples on request.

THE BAYER COMPANY DIVISION

of Sterling Drug Inc.

1450 Broadway, New York 18, N. Y.

Case Report on Hemophilus Influenzae Meningitis in An Adult

Recovery from a critically ill condition was quickly achieved without the use of intrathecal therapy

J. B. PIKE, M.D., *Massena, New York*

Hemophilus influenzae meningitis in patients over 20 is rare.

A white laborer, 36 years of age, was hospitalized at 12:05 A.M., semicomatose, with a rectal temperature of 105.6.

He had a slight headache on arising the previous day, but had worked as usual. Following his evening meal he became ill—rapid rise in temperature, severe headache and intractable vomiting. When seen at home at 11:30 P.M., he was critically ill, markedly dehydrated and semicomatose. He had had grand mal seizures for the past five years, which were well controlled with diphenylhydantoin sodium, 0.1 gm. daily.

The pupils were pinpoint, and he had a divergent strabismus; tongue dry and coated; pharynx inflamed, definite nuchal rigidity, positive Kernig. Spinal fluid thin cream and clotted rapidly, 3,157 pmn., 2,475 mono. Culture revealed *H. influenzae,* type B. W.B.C. 6,500—5% lymphs., 95% neutrop.

Fluids by vein started on admission. At 2:15 A.M., he was given 3 gm. sodium sulfamerazine in 500 cc. of molar lactate intravenously and started on 1,000,000 units regular penicillin intramuscularly. Dihydrostreptomycin, 1 gm. twice daily, was

begun. By 8 A.M. he was rational and able to take oral medication. Oral sulfamerazine, 1 gm. every eight hours was begun.

The next day the penicillin was stopped, and he was placed on tetracycline, 500 mg. every four hours. Sulfamerazine increased to 1 gm. every six hours, and diphenylhydantoin sodium, 0.1 gm. twice daily, was started.

This regimen was continued for seven days, and then the streptomycin was reduced to 1 gm. daily, the tetracycline cut to 250 mg. every four hours, and the sulfamerazine to 1 gm. every eight hours. Five days later the streptomycin was discontinued and the tetracycline dropped to 250 mg. four times daily. Intrapsinal therapy was never used.

Recovery was phenomenal—completely afebrile three days after hospitalization with return of appetite and no complaints. Ambulation was begun seven days after admission. At no time was there evidence of relapse or the development of late neurologic complaints. Lumbar puncture eleven days after hospitalization showed clear fluid, 7 monos, smears and cultures negative. Discharged after two weeks on Sulfamerazine, 1 gm. four times daily for one week.

The patient was seen in the office six days after discharge with no complaints and normal neurologic findings, and he returned to work six days after this visit, and has been well since. Recovery without intrathecal therapy was rapid and complete.

New York State J. Med., 11:1628-1629, 1955.

Too Little Thyroid Secretion

The diagnosis of myxedema remains largely clinical, and desiccated thyroid is still the treatment. If there is a long-standing myxedema or myxedema heart disease, the dosage must be small and increased very carefully. It is generally best to take thirty days to bring the BMR to normal. The maximum initial dosage is 15 mg. desiccated thyroid daily; this is increased at intervals of ten days to two weeks until response is satisfactory.

Mild hypothyroidism is frequently overlooked. Some patients are nervous, thin, irritable and suffer from insomnia. Hypothyroidism should be considered in any patient who complains of chronic fatigue, lethargy, weakness, cold hands and feet, low tolerance to external cold, chronic constipation, or any menstrual disorder.

The most reliable symptoms are chronic coldness of the hands and feet, intolerance to cold and fatigability. If the diagnosis is not clear, a therapeutic trial of thyroid is in order.

The treatment for hypothyroidism, as for myxedema, is desiccated thyroid. However, the dosage (usually 65 to 200 mg. daily) is larger than in myxedema, the tolerance to overdosage is greater, and the variability in requirements from one patient to another is wider. Some hypothyroid patients require medication throughout life; but in most, a period of six months to a year restores the endocrine balance.

Physician's Bull., 6:165-167, 1955.

Oral Continuous Drip Treatment of Peptic Ulcer in the Ambulatory Patient

Salivation is stimulated so that, for a period of time from half an hour to an hour, the patient is receiving small portions of antacids and powder

F. STEIGMANN, M.D., et al., *Chicago, Illinois*

Most of the antacids tested control free acidity for not more than 15 to 60 minutes. So for most patients gastric acidity is neutralized only part of the time. In many cases ulcer symptoms are not sufficiently controlled. Hospitalized patients can be adequately treated with a regular milk-antacid regimen, or with a continuous intragastric drip of a milk-medication mixture.

A new antacid tablet* containing a mixture of antacids and milk powder should be dissolved while it is held between gums and the cheek. This stimulates salivation so the patient continuously swallows saliva containing portions of antacids and powder.

These tablets of solids from whole milk with dextran and maltose, magnesium trisilicate, magnesium oxide, calcium carbonate, magnesium carbonate and peppermint oil can be used without discomfort or interference with speech, and they dissolve over a period of 25 to 60 minutes.

Observations of 46 patients using these tablets showed a good initial response with only minor side effects noted.

This "ambulatory drip therapy" seems to offer a new highly effective approach for the treatment of patients with peptic ulcer.

*Nulacin, manufactured by Horlicks Corporation, Racine, Wisconsin.

Am. J. Digest. Dis., 3:67-71, 1955.

ACTH

q 2 days

rather than q 12 h

One injection is effective for 24 to 72 hours or more

By adsorption of ACTH on zinc hydroxide, Cortrophin-Zinc permits extension of ACTH activity for a period of 1 to 3 days. This minimizes the therapeutic "ups and downs" which may occur during ACTH-in-gel therapy and provides smooth corticotropin action for a truly extended period.

Cortrophin-Zinc is easier to handle than gelatin preparations. An aqueous suspension, it flows easily through a 26-gauge needle, eliminating preheating, clogging syringes, and heavy-gauge needles that add to the pain.

Cortrophin-Zinc is supplied in 5 cc vials each cc containing 40 U.S.P. units of corticotropin with 2 mg. of zinc.

CORTROPHIN* ZINC†

a development of **Organon Inc.**
ORANGE, N. J.

*T.M.—Cortrophin Available in other countries as Cortrophine-Z †Patent Pending

Treatment of Amebiasis With Erythromycin

Erythromycin is a valuable agent in the treatment of amebiasis, chronic and acute. The best results were obtained using the drug at a dosage of 1.2 gm. daily for five days. This was preceded by a high initial dose of 800 mg. At this dosage, the parasitological relapses were 3% in the group observed, while the percentage went up to 12 when only 0.8 gm. per day was used. Start medication with high doses to insure an effective concentration of the drug in the serum and tissues, as well as in the intestinal lumen. This will prevent the parasite from acquiring resistance to the drug.

Villarejos, V. M., *Am. J. Tropical Med. & Hygiene*, 4:699, 1955.

Silicone Spray on the Skin of Bedridden Patients

Two percent silicone in 95% ethyl alcohol (555 Fluid), when sprayed daily on the buttocks and backs of 41 bedridden, incontinent, senile patients prevented dermatitis from forming. It cleared the skin of 26 patients in whom a dermatitis was already present.

There were no toxic or allergic reactions.

Brusca, D. D., *New York State J. Med.*, 56:894-895, 1956.

Short Cut For the Diabetic

Dip a short piece of the 'Tes-Tape,' 1½ inches long, into urine, remove and allow to dry in air (not on paper) for one minute. Color is then compared with a color chart affixed to the dispenser. The amount of sugar is indicated either in percentage up to 2%, or in the commonly used plus system.

Each roll of paper tape contains enough material for 100 tests. This is a convenient way for a busy person to run tests during the working day or while travelling.

Physician's Bulletin, 21:67-68, 1956.

Treatment of Hypothyroidism

The effect of cortisone treatment in five cases of myxedema has been observed. No change was produced in the physical or biochemical state of these patients. A marked quickening of mental processes was noticed. There does not appear to be any good reason for using cortisone as an adjuvant to thyroid extract in most cases of hypothyroidism. The quickening of mental activity, produced in these patients by cortisone, might make this drug helpful in those cases of myxedema in which drowsiness is marked and in which the development of coma is a possibility.

Summers, V. K., *Brit. M. J.*, 4964:430-431, 1956.

Digitalis in the Shock of Coronary Occlusion

A report is given of the primary treatment with intravenous digitalis glycoside of four patients with myocardial infarction, one in clinical shock and three with shock and pulmonary edema. All four showed remarkable clinical response with a rise in blood pressure, decrease in pulmonary edema and dramatic clearing of coma. Three of the four patients ultimately survived. The authors re-emphasized that the shock of myocardial infarction represents true myocardial failure, and that in these cases only one fourth to one half of the initial dose that would be given to the average cardiac patient, should be given.

The experience recorded by these authors should stimulate thorough re-study of the matter. The arguments against digitalis are that it may decrease cardiac output in the absence of digestive failure, may rupture the infarct or may induce or potentiate ventricular tachycardia or fibrillation.

Beckman, Harry, *Wisconsin M. J.*, 55:2, 174, 1956.

Cirrhosis in Alcoholics—Protein Nutrition and Hepatic Coma

The provision of a diet high in protein has been emphasized for the treatment of alcoholics with cirrhosis of the liver. Alcoholics form the largest number of patients in whom cirrhosis develops in the United States. They consume food deficient in protein but adequate or sometimes high in calories, resulting in fatty infiltration, areas of necrosis and subsequent fibrosis.

With present knowledge, every effort should be made to insure that the patient with cirrhosis of the liver consumes a *normal, well-balanced diet, preferably one to his liking.* If the physician believes that the situation may be improved by increasing the protein content, he should do so with the knowledge that hepatic coma may appear. With this knowledge, he can then watch diligently for the earliest signs of this phenomenon (untidiness, the "faraway look in the eye," mental confusion, and the typical flapping tremor). If any of these appear, the physician will want to eliminate protein altogether for a day or so, observing changes in mental state apparently related to this change in diet. No harm should result from providing an adequate or even a high-protein diet to patients with liver disease, if expert and careful watch of patients is maintained.

Davidson, C. S., *J.A.M.A.*, 160:390-391, 1956.

Allergy to Insect Stings

Instances of death from a single insect sting have been described throughout recorded history. In recent years more and more reports of death from anaphylaxis have been published.

Many near-fatalities have occurred—a policeman on his beat, a home-owner clipping his hedge, a gas station attendant, and a boy gathering apples from the ground. As this paper was being written, local newspapers printed the case of a ballerina, who while dancing was stung by a wasp and became unconscious. The use of epinephrine and hospitalization was necessary.

Brown, H., *M. Ann. District of Columbia*, 25:27-29, 1956.

Clinical Aspects of Parkinsonism

Early diagnosis may save the patient without tremor from being subjected to unpleasant forms of inpatient investigation, or from being referred to a psychiatrist because of increasing slowness and inefficiency. Forty per cent of victims have no tremor when first seen. In the early stages, patients tend to minimize their disability or to deny its obvious existence. The neurologist often discovers Parkinsonism in a patient being examined for a different reason. The commonest early physical signs are rigidity and the ocular changes.

Of 200 patients with Parkinsonism:

No rigidity 6 (3%)
No eye signs 9 (4.5%)
No tremor 77 (38.5%)

Though usually first sought at the wrist and elbow, rigidity usually begins in the neck. The frozen facial expression, lack of melody in the voice, slowness of movement and diminishing size of calligraphy are to be related to muscular rigidity. Many of these are absent when the diagnosis could be firmly established.

The most important eye sign is the glabellar tapping sign, which is diagnostic of the Parkinsonian state even if present in isolation. It occurs in 80% or more of cases. It seems to be a reaction to menace, though the visual stimulus is not essential and the sign can sometimes be produced by tapping the glabella when the eyes are lightly closed. Blepharoclonus is almost as common but is not diagnostic. Defects of convergence are less common and are by no means diagnostic of the post-encephalitic state. Today only 4% of patients show oculo-gyric crises.

Probable Etiology of Parkinsonism:

Idiopathic 41%
Post-encephalitic 31%
Arteriosclerotic 21%
Miscellaneous 7%

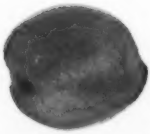
Atheriosclerotic Parkinsonism is often associated with other evidence of cerebral arteriosclerotic change, including dementia and signs of pyramidal involvement; the Parkinsonian part of the picture is frequently missed. Two per cent of the patients show clinical and serological evidence of neurosyphilis as well as Parkinsonism which may be significant, but Parkinsonism may also coexist with disseminated sclerosis or subacute combined degeneration of the cord. Multiple factors may be concerned in the production of Parkinsonism (including various forms of poisoning); the main factor has not yet been discovered and the condition is still as progressive as it was in the days of Parkinson himself.

Garland, H., *Proc. Roy. Soc. Med.*, 48:867-968, 1955.

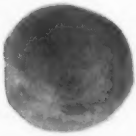
Chronic Perionychia

In the management of chronic inflammation of the finger nailfolds, carbolfuchsin or gentian violet, "pink for a little girl, blue for a boy," is recommended. The little girl probably already uses pink or red paint on her nails, so the application passes unnoticed. Blue for a boy, as any male going about with pink nails might be suspected of some sexual abnormality. If there is a recurrence, it is possible that the infection could be in the nail itself, so treatment should be continued until all the nail present at the commencement of treatment has grown out.

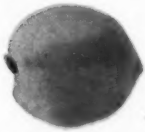
Coleman, F., *Brit. M. J.*, 4958:113-114, 1956.



a delightful new taste



n antibiotic therapy...



just like a fresh peach

BON*

HOMOGENIZED MIXTURE

new... peach-flavored, peach-colored liquid form of TERRAMYCIN*†

125 mg. oxytetracycline per 5 cc. teaspoonful; bottles of 2 fl. oz. and 1 pint, packaged ready to use.

*Trademark †Brand of oxytetracycline

Pfizer PFIZER LABORATORIES, *Division, Chas. Pfizer & Co., Inc.*, Brooklyn 6, N.Y.

Analysis of the Carotid Artery Syndrome

The syndrome of occlusion of the internal carotid artery is not infrequent, and the clinical picture is high variable. It deserves a place in the differential diagnosis of patients presenting motor signs, ranging from slight transient weakness to hemiplegia; any degree of aphasia; and mental aberrations varying from slight personality change to dementia or coma. Headache, paresthesias or eye signs may or may not occur. Internal carotid arterial pulsations in the neck above the level of the hyoid bone should be routinely examined. Caution must be exercised in carotid palpation in older individuals with arteriosclerotic changes of severe degree. Never should both arteries be compressed at the same time.

Dissection of the carotid arteries in the neck should be a part of every postmortem examination.

Norris, F. G., et al, *North Carolina M. J.*, 17:8-14, 1956.

Poliomyelitis in Pregnancy

The incidence of poliomyelitis during pregnancy was investigated in New York City in a prospective study of all cases reported in females, 15 to 44 years of age, for a five year period, 1949-1953.

A total of 87 cases were observed in pregnant women; 59% more than that expected on the basis of age-specific rates in the female population of childbearing age. The percentage increase in clinical infections noted during pregnancy was the same for paralytic and nonparalytic cases.

The attack rate was higher in pregnant women with previous live births. Relation between parity and the incidence was observed in each maternal age group, and appeared to be dependent, in part, on the number of children in the household.

Only two fatal cases occurred, both in the last trimester of pregnancy.

Siegel, M., et al, *New England J. Med.*, 253:841-847, 1955.

Drug Addiction in Denmark

In 1949, the public health authorities started the morphine register. It has been possible to compile an accurate census of Denmark's drug addicts. About 50% of the 800 to 900 addicts are in Copenhagen, and many are physicians. In addition to the surgeon, who light-heartedly prescribes opiates after operations, and the psychiatrist, who prescribes them to calm his patients, there is the manufacturer who advertises a new drug with an assurance that it can be taken without risk of addiction. A certain number of recruits to the ranks of addicts come from alcoholics whose alcoholism has been cured by disulfiram, and whose craving for a substitute is met by some opiate. The physician who dispenses opiates too freely to his patients or himself may now be forbidden to prescribe opiates for a given period, or he may be persuaded to abandon his right to such prescribing voluntarily. In extreme cases, when the physician himself is convicted of addiction, he may be forced to submit to treatment in a hospital. Should he prove refractory, his right to practice medicine may be revoked.

Foreign Letters (Denmark) *J.A.M.A.*, 160:694, 1956.

eradicate

VAGINAL INFECTION

root and branch...

BACULIN®

VAGINAL TABLETS

Destroys All *Trichomonas vaginalis, Candida albicans* and non-specific pathogens ON CONTACT...

Detergent Action assures therapeutic s-p-r-e-a-d and penetration —and ELECTROCUTES infectious organisms...

Buffers the Alkaline pH of an infected vagina —to EFFECTUATE anti-infective potency, —to RESTORE optimum environment for health...

Digests Muco-Proteins and promotes disintegration of pathogens...

Stops Itching and Odor Almost at Once—and WITHOUT THE SIDE REACTIONS of antibiotics, hormones and sulfonamides...

Reinforces the Normal Lactic Acid Balance, promotes glycogen metabolism and accelerates regrowth of normal vaginal flora.

Formula:

Each **BACULIN** Vaginal Tablet contains:

Diiodohydroxy quinoline, U.S.P.	100 mg.
Phenylmercuric acetate	3 mg.
Sodium lauryl sulfate, U.S.P.	3 mg.
Potassium aluminum sulfate, N.F.	14 mg.
Papain	20 mg.
Lactose, U.S.P.	430 mg.
Dextrose anhydrous, U.S.P.	736 mg.

For further data and samples, please write to Medical Director

WARE DRUG COMPANY, INC.

Failures in the Treatment of Bacterial Endocarditis

The reasons for a fatal result may be lack of a diagnosis or a diagnosis made too late, when irreversible destructive changes have taken place in the heart valves. In this disease, the host's ordinary mechanisms of resisting infection are not effective. The bacteria are not readily accessible to the white blood cells. We need to use antibiotics in *killing doses*. About 90% of the strains of *Strep. viridans* that cause bacterial endocarditis can be killed with doses of penicillin from one to two million units daily. The more resistant organisms may take 10 million units a day, supplemented by the synergistic effect of streptomycin. The use of Benemid, 2 gm. daily, will enhance the blood level of penicillin. A considerable period of contact with penicillin is necessary to effect a cure, probably four or five weeks of treatment is safer than two weeks.

Intermittent intramuscular injection of the aqueous penicillin is favored by most since high blood level peaks can be obtained best by this method. If the doses are too far apart, the bacteria will recover partially from one injection and begin reproducing before the effects of the next can be exerted. Injections, at three or four hour intervals, of aqueous penicillin provide extremely high blood levels capable of penetrating into the mass of bacteria in the vegetations.

Some failures occur because, even though the infection is cured, there has been irreparable damage to the brain or kidneys by emboli, or to the heart valves by the destructive action of the bacteria and the cicatricial process of healing. This fact alone emphasizes the necessity for earlier diagnosis.

Craige, E., *North Carolina M. J.*, 17:1-3, 1956

Plasma Protein Changes in Acute Rheumatic Fever

In every instance, significant elevations of alpha globulins and fibrinogen concentrations are present in the acute phase of the disease and albumin concentration is depressed. The degree and persistence of the protein alterations usually reflect the severity of the initial attack.

In view of the importance of continued therapy and rest in the patient with persisting rheumatic activity, an accurate appraisal of the inflammatory response is necessary. The sedimentation rate has been a valuable procedure for this evaluation. Recently investigations of the C-reactive protein titers in rheumatic fever have indicated that this method might determine more critically inflammatory processes within the body.

Without exception, the alpha globulin and fibrinogen concentrations are increased and the albumin concentrations are decreased, during the acute phase of the illness. The degree of protein alterations and the duration of the abnormal pattern parallel the severity of the rheumatic inflammation. Comparative studies of protein fractionation, erythrocyte sedimentation rate and C-reactive protein titer indicate that evaluation of the alpha globulin concentration by cationic detergent fractionation is the most sensitive index of inflammatory activity in rheumatic fever.

Jacox, R. F., *New York State J. Med.*, 56:672-679, 1956.

Prolonged Labor

A study of 12,760 cases revealed that labor lasting longer than 24 hours was reduced to 2%, in contrast to the 8 to 9% of earlier years. In many prolonged labors, the only problem involved the alleviation of apprehensions of the patient and her family. Factors in the lowered incidence included prenatal counseling in formal classes for both husbands and wives, counseling during labor was done in privacy, and there was an early investigation of abnormal labor. Failure to make progress after four to six hours of active labor requires vaginal and x-ray examinations. *When positively indicated,* artificial rupture of the membranes is performed with antibiotic prophylaxis.

Evans, T. N., *Obstetrics and Gynecology,* 6:522, 1955.

Induction of Labor

Each of the two fatal cases which were studied had an elective induction of labor with Pitocin administered by intravenous drip.

There are few valid reasons, other than pre-eclampsia, for the elective induction of labor, and then it should be done only if conditions are right and the cervix is well dilated and soft. Two other acceptable indications have been recognized in recent years:

1. History of very rapid labor.
2. Patients who live some distance from the hospital, especially if rapid labor is anticipated.

Elective induction is not justified for the convenience or desire of the physician or patient. If conditions are favorable, the cervix is soft, more than half effaced and dilated 1 to 2 cm., and no contraindications exist, in many cases a simple aseptic rupture of the membranes will inaugurate contractions. A cervix long, hard and closed indicates that the patient is probably not at term. Postmaturity, *if there is such a condition,* is no indication.

In recent years Pitocin by intravenous drip (1:1000 or less dilution) has been used to supplement the forces set in action by rupture of the membranes. Some still use 1 minim intramuscular injections of pituitrin, but Pitocin is much safer. Pitocin infusion must be constantly controlled, and the criteria for its use absolutely fulfilled. Pitocin by intravenous drip is valuable also in primary uterine inertia, but there must be positive assurance that the patient is in labor, proved by effacement and dilation of the cervix.

Page outlined the intravenous

drip use of Pitocin as follows:

Contraindicated:

1. Cephalopelvic disproportion.
2. Fetal malpresentations causing dystocia.
3. Factors predisposing to uterine rupture (previous section, high multiparity).
4. Factors predisposing to thromboplastin or amniotic fluid embolism (dead fetus, abruptio placentae).
5. Hypertonic patterns of labor.
6. Inability of physician to be in attendance.

Clearly indicated:

1. Prolonged labor due to atonic uterine inertia.
2. Induction of labor when combined with rupture of the membranes.
3. Induction of labor one or more days after spontaneous rupture of membranes.
4. The prevention of postpartum hemorrhage in selected cases.
5. Active treatment of postpartum hemorrhage due to uterine atony.
6. Possibly in emptying uterus of hydatid mole.

Debatable:

1. Induction of labor without artificial rupture of membranes.
2. Secondary inertia during second stage of labor.
3. Missed abortion.

Taylor, J. S., *Pennsylvania M. J.*, 59:38-39, 1956.

Calcium Supplements

Administration of calcium salts is essential in pregnancy, but the wrong kind of supplement may actually *lower* serum calcium. Most ordinary supplements are contraindicated, because they contain calcium-depressing phosphates.

Calcisalin® supplies calcium in the usable form of calcium lactate rather than phosphate. It also provides reactive aluminum hydroxide gel, to help absorb excess dietary phosphorus. A group of pregnant patients with leg cramps received no relief with dicalcium phosphate supplements. The tetanoid-type ailments disappeared in every case when the patient was placed on two tablets of Calcisalin three times daily.

Fandrich concludes that "the indication of increased calcium absorption suggests the use of this preparation as a routine prenatal supplement to insure adequate calcium levels."

Fandrich, T. S., *J. Michigan M. Soc.*, 53:862, 1954.

Influence of Anesthesia on Infant Mortality Rate in Cesarean Sections

A pleasant, more rapid induction of anesthetics is made possible by the administration of 100 mg. of thiamylal sodium intravenously. This technique does not appear to cause more fetal depression than occurs when anesthesia is conducted with cyclopropane as the sole agent.

An analysis of 671 consecutive cesarean sections established that the variations in infant mortality rates, following cesarean sections conducted with modern anesthetic methods and techniques, are statistically insignificant when the fetus is full term and no maternal or fetal complications are present. The over-all infant mortality rate is slightly lower following conduction anesthesia than that following balanced anesthesia.

Lund, P. C., *J.A.M.A.*, 159:1586-1591, 1955.

NEW PHARMACEUTICAL PRODUCTS

Terrabon *(Pfizer)*

The broad-spectrum antibiotic Terramycin in a homogenized mixture formulated in ready-mixed form. Each 5 cc. teaspoonful contains 125 mg. of Terramycin. *Indications:* Infections caused by gram-positive and gram-negative bacteria. *Dosage:* orally as directed by physician. *Supplied:* bottles of 2 oz. and one pint, peach flavored.

Mediatric Tablets *(Ayerst)*

A new dosage form for use in preventive geriatrics. Provides estrogen and androgen in small doses, nutritional factors and a mild antidepressant. *Dosage:* as directed by physician. *Supplied:* bottles of 100 and 1,000 tablets.

Medihaler-Iso *(Riker)*

Description: Solution of 0.25% Isoproterenol U.S.P. and 0.1% ascorbic acid as a preservative in an inert propellent. Alcohol 33%. Packed in a specially designed vial with a metered dose valve. For use with Medihaler Oral Adapter. *Indications:* for oral inhalation with Medihaler Adapter for temporary relief of the spasms and wheezing of bronchial asthma. *Dosage:* one or two inhalations as may be necessary for relief. *Supplied:* 10 cc. vials.

Pentritol Tempules Oral Vasodilator *(Evron)*

Disintegration capsule of 30 mg. pentaerythritol tetranitrate which extends the coronary vasodilation of a single dose to 12 hours. *Indications:* prevention of anginal attacks, angina decubitis, precordial pain, coronary insufficiency, intermittent claudication and status aginosis. *Dosage:* 1 or 2 Tempules on arising and 12 hours later.

Reserpine with Mebaral *(Winthrop)*

Sedative, tranquilizer and antihypertensive. Each tablet contains 0.15 mg. of reserpine and 30 mg. (½ grain) of Mebaral. Action is through two sites of central nervous system action—cortical and hypothalamic—permitting more effective management of anxiety and tension states. Blood pressure alterations in persons with normal pressure are insignificant. *Indications:* anxiety and tension states, premenstrual tension, menopausal syndrome, essential hypertension, angina pectoris and other disorders where an immediate and sustained tranquilizing effect is desirable. *Dosage:* Usually one tablet 3 times daily. Initially, some patients may require somewhat larger doses. *Supplied:* bottles of 100 tablets.

Bonadoxin Drops *(Roerig)*

A combination of meclizine dihydrochloride and pyridoxine hydrochloride (vitamin B_6). It is free of atropine-like side effects, or barbiturate hangover and addiction. *Indications:* infant colic, paroxysmal fussings and irritable crying in the hard-to-manage infant. Provides antihistamine action to relieve colic of possible allergic origin, anticholinergic activity to break the cycle of emotional tension and to relieve pain, and tranquilizing effect to calm the infant and permit sleep. Protects against colic and infantile convulsive disorders resulting from pyridoxine deficiency. *Dosage:* drops given orally may be mixed with formula or fruit juices, if desired. *Supplied:* 30 cc. plastic dropper bottles.

Uritral *(Central Pharmacal)*

Urinary antiseptic-analgesic. Each capsule contains 0.2 gm. of calcium mandelate, 0.2 gm. of methenamine, 50 mg. of phenylazo-diamino-pyridine hydrochloride and 80 mg. of sodium phosphate, monobasic. *Indications:* uncomplicated cystitis, pyelitis, pyelonephritis, prostatitis, nonspecific urethritis, and as a prophylactic against bacilluria, especially following instrumentation or surgery. *Contraindications:* chronic glomerular nephritis, renal insufficiency, pyelonephritis of pregnancy with gastrointestinal disturbance, severe hepatitis and uremia. *Dosage:* adults, 2 capsules three or four times daily. For children over 6 years of age, one capsule three times daily. *Supplied:* bottles of 100 and 500 capsules.

Malignant Thyroid Nodules

The danger inherent in the thyroid nodule is not that of *pre*malignancy, but of *malignancy* existing. It would be wise to base indications for thyroidectomy on clinical features rather than on statistical surveys of selected cases. Various clinical impressions and facts from the pathology laboratory would suggest that:

1. Soft, involuting multiple nodules may be disregarded.
2. Firm, solitary nodules should be removed, particularly among children and young adults in whom the probability of cancer is great.
3. Any lesion enlarging or giving symptoms of pressure or other discomfort should be explored unless diagnosis of thyroiditis is obvious.
4. Large adenomatous goiters may be removed for cosmetic reasons and because of danger of future hyperthyroidism.

Lobb, A. W., *Northwest Med.*, 54:1415-1416, 1955.

Bowel Movements After Anorectal Surgery

After the initial pain of anorectal surgery has decreased, the patient focuses his fears on the first bowel movement, usually occurring on the third day. Three methods were used to soften the stool:

1. Bulk laxatives starting the first postoperative day. Fleet's Phospho-Sodo, 2-3 drams, is given on the third morning followed by a plain-water enema, as needed.
2. Bulk laxatives beginning on the second postoperative day. An oil retention enema is given on the third morning, followed by a plain water enema.
3. Bulk laxatives starting on the first day; no enema is given until after the first bowel movement, unless for relief of excessive rectal fullness.

Little difference was noted in the results of these three methods.

Wimberly, J. A., et al, *Kentucky M. J.*, 53:967-971, 1955.

Improved Asepto Syringe For Bladder Irrigation

Many times the problem arises of removing foreign material, particularly blood clots, from the bladder.

Becton, Dickinson & Company's inexpensive Asepto Syringe No. 2082 is used exclusively by the author in bladder irrigation, and is recommended as most practical for removing foreign material from the bladder through any type of catheter.

Neely, S. D., et al., *J. Oklahoma M. A.* 49:81, 1956.

Urinary and Anal Incontinence

The nerve supply to both the anal and bladder sphincters originates in the second, third and fourth sacral nerves. Any disease or injury to the source of these nerves may produce an inability to control bowel movements and urinary flow. Traumatic severance of the nerve supply, incuding surgical operations, may be the cause, or it may be due to congenital anomalies of each sphincter.

The gracilis muscle has been used both as a urinary and anal sphincter imitator. The muscle originates on the pubic bone and inserts on the tibia. It has an abundant blood and nerve supply. Loss of its ordinary function will not be of consequence. It is thin and long, and so is an excellent choice for the purpose.

This muscle is detached from the tibial insertion and dissected free to its origin on the pubis. The large neurovascular bundle at the proximal end must be saved. The nerve supply is derived from the obturator, and the blood supply is a branch of the femoral artery. The perineum is exposed, the muscle tendon is interwoven through the soft tissues around the anus, including the levator ani, and anchored to the opposite ischial tuberosity with stainless steel wire. Before the wire suture is positioned, the anal orifice is tested with a gloved finger, pulling the muscle taut and approximating the position to suture the attachment. It is better to make the anal opening too tight than too loose.

If there is urinary incontinence also, the opposite gracilis muscle is used to correct this condition. The bulbocavernosus muscle is exposed, and the muscle and tendon are wrapped around it and the urethra in a barber-pole manner, in order to distribute the constriction over a wide area. The end of the tendon is then likewise attached to the opposite ischium. Utilization of both gracilis muscles at one operation is a new technic. Some 30 of the anal procedures have been performed to date in this country.

Snyder, C. C., *J. Florida M. A.*, 42-635-639, 1956.

Healing of Clean Surgical Wounds of Thorax and Abdomen

A study of 211 patients with 222 clean major surgical wounds of the thorax and abdomen, of which 50% had routine clean, sterile surgical dressings and the other 50% had no dressings, revealed that the wounds without dressings heal more rapidly and with less local inflammatory reaction. The patients raised no objection to this program and even welcomed the opportunity of watching their wounds heal. The inguinal hernioplasty wounds healed as readily, without complications, as wounds in other areas of the abdomen.

Palumbo, L. T., et al, *J.A.M.A.*, 160:553-555, 1956.

Spigelian Hernia

Spigelian hernia occurs infrequently and is even more rarely recognized clinically; it may assume importance in the differential diagnosis of obscure abdominal tumors, acute appendicitis and intestinal obstruction.

Spigelian hernia occurs through slitlike defects in the transversalis aponeurosis along the lateral margin of the rectus muscle. After bursting through the internal oblique, the hernia becomes interstitial, deeply situated and difficult to define. It

Throughout the world...

se in millions of cases

nd reports by thousands

f physicians have built

onfidence in

TERRAMYCIN

RAND OF OXYTETRACYCLINE

...well-tolerated, rapidly effective broad-spectrum antibiotic of choice.

Capsules, tablets, taste-tempting liquid forms and special preparations for parenteral, topical and ophthalmic use.

Pfizer

PFIZER LABORATORIES, *Division, Chas. Pfizer & Co., Inc.*, Brooklyn 6, N.Y.

may enlarge interparietally deep to the external oblique, or it may dissect laterally, appearing most prominently in the region of the anterior superior spine. Later, the hernia may penetrate the external oblique and appear subcutaneously. In rare instances, a portion of the hernia is subcutaneous and the remainder intersitial, or there may be two diverticula, one subcutaneous and the other properitoneal.

Isaacson, N. H., *M. Ann. District of Columbia*, 52:23-26, 1956.

Blood Transfusion

Whole blood should be used primarily to replace the active loss of whole blood, which is lost accidentally or during extensive surgical procedures. Whole blood is used in many instances where red cells only are necessary. A possible indication for the use of whole blood is the correction of anemia plus hypoproteinemia. It is important to avoid overloading the circulation.

Plasma has been widely used for restoring blood volume until such time as whole blood is available—most readily by the use of freshly-frozen plasma, thawed immediately before use. Such plasma is more effective than fractions prepared chemically, and is less expensive.

There has been much use of plasma as a source of whole protein for intravenous use, although its value has not been determined. In view of the cost and relative inefficiency of plasma, it would seem best to use amino acid and glucose solutions instead. The main use of plasma would then still be confined to emergency situations where shock is a feature. The danger of serum hepatitis has been the main drawback i this regard, but evidence sugges that liquid stored at room tempera ture at least six months before u is free of that virus.

Plasma fractions are used in se eral fields. Gamma globulin is we known as an agent for passive im munization, providing the ant bodies which any donor pool has. has recently been popular in rega to poliomyelitis, and it has been ro tinely used for attenuation measles.

Serum albumin has become ava able both commercially and throug the Red Cross. It has been used f its osmotic effect in shock and f relief of hypoproteinemia. It can pasteurized and does not transm hepatitis. The indications and a vantages in shock are the same those of plasma. In hypoproteinem large amounts must be given—fro 50 to 100 gm. per day for 10 to days. Serum albumin therapy very expensive except when it supplied by the Red Cross.

Prichard, R. W., *North Carolina M. J.*, 17:9 1956.

Nitrogen Mustard in Treatment O Advanced Carcinoma of Lung

The results of a study in 198 p tients substantiate those results previous observers that 40 to 5 of patients with advanced bronch genic carcinoma obtain symptoma relief from nitrogen mustard th apy. Contrary to most reports, t study suggests that it is efficacious repeat the course of nitrogen m tard at regular intervals of ei weeks, regardless of the respo to the first course. It appears t the combination of multiple cour

M CONFUSION to a normal behavior pattern

NICOZOL
relieves mental confusion and deterioration, mild memory defects and abnormal behavior patterns.

NICOZOL for senile psychoses

REHABILITATION and RELEASE
from public and private psychiatric institutions for the mildly confused and mildly deteriorated aged patients may be accomplished by treatment with the NICOZOL formula.[1]

NICOZOL IS SUPPLIED
in capsule and elixir forms.
Each capsule or ½ teaspoonful of elixir contains:
Pentylenetetrazol —— 100 mg.,
Nicotinic acid —— 50 mg.

Coupon for Free NICOZOL
Specialties, Inc.
Box 830, Winston-Salem, N. C.
send me professional sample of NICOZOL Capsules,
erature on NICOZOL for senile Psychoses.

.....M.D.

.....Zone....State.....

1. Levy, S., *J.A.M.A.*, 153:1260, 1953.
2. Thompson, L., Procter, R., *North Carolina M. J.*, 15:596, 1954.

DRUG SPECIALTIES, INC.
WINSTON-SALEM, N. C.

ETHICAL PHARMACEUTICALS

Sole Distributors in California, The Brown Pharmaceutical Co., Los Angeles

may enlarge interparietally deep to the external oblique, or it may dissect laterally, appearing most prominently in the region of the anterior superior spine. Later, the hernia may penetrate the external oblique and appear subcutaneously. In rare instances, a portion of the hernia is subcutaneous and the remainder intersitial, or there may be two diverticula, one subcutaneous and the other properitoneal.

Isaacson, N. H., *M. Ann. District of Columbia*, 52:23-26, 1956.

Blood Transfusion

Whole blood should be used primarily to replace the active loss of whole blood, which is lost accidentally or during extensive surgical procedures. Whole blood is used in many instances where red cells only are necessary. A possible indication for the use of whole blood is the correction of anemia plus hypoproteinemia. It is important to avoid overloading the circulation.

Plasma has been widely used for restoring blood volume until such time as whole blood is available—most readily by the use of freshly-frozen plasma, thawed immediately before use. Such plasma is more effective than fractions prepared chemically, and is less expensive.

There has been much use of plasma as a source of whole protein for intravenous use, although its value has not been determined. In view of the cost and relative inefficiency of plasma, it would seem best to use amino acid and glucose solutions instead. The main use of plasma would then still be confined to emergency situations where shock is a feature. The danger of serum hepatitis has been the main drawback in this regard, but evidence suggests that liquid stored at room temperature at least six months before use is free of that virus.

Plasma fractions are used in several fields. Gamma globulin is well known as an agent for passive immunization, providing the antibodies which any donor pool has. It has recently been popular in regard to poliomyelitis, and it has been routinely used for attenuation of measles.

Serum albumin has become available both commercially and through the Red Cross. It has been used for its osmotic effect in shock and for relief of hypoproteinemia. It can be pasteurized and does not transmit hepatitis. The indications and advantages in shock are the same as those of plasma. In hypoproteinemia, large amounts must be given—from 50 to 100 gm. per day for 10 to 14 days. Serum albumin therapy is very expensive except when it is supplied by the Red Cross.

Prichard, R. W., *North Carolina M. J.*, 17:95-97, 1956.

Nitrogen Mustard in Treatment Of Advanced Carcinoma of Lung

The results of a study in 198 patients substantiate those results of previous observers that 40 to 50% of patients with advanced bronchogenic carcinoma obtain symptomatic relief from nitrogen mustard therapy. Contrary to most reports, this study suggests that it is efficacious to repeat the course of nitrogen mustard at regular intervals of eight weeks, regardless of the response to the first course. It appears that the combination of multiple courses

OM CONFUSION to a normal behavior pattern

NICOZOL
relieves mental confusion and deterioration, mild memory defects and abnormal behavior patterns.

NICOZOL *for senile psychoses*

REHABILITATION and RELEASE
from public and private psychiatric institutions for the mildly confused and mildly deteriorated aged patients may be accomplished by treatment with the NICOZOL formula.[1]

NICOZOL IS SUPPLIED
in capsule and elixir forms.
Each capsule or ½ teaspoonful of elixir contains:
Pentylenetetrazol —— 100 mg.,
Nicotinic acid —— 50 mg.

1. Levy, S., *J.A.M.A.*, 153:1260, 1953.
2. Thompson, L., Procter, R., *North Carolina M. J.*, 15:596, 1954.

ail Coupon for Free NICOZOL
ug Specialties, Inc.
O. Box 830, Winston-Salem, N. C.
dly send me professional sample of NICOZOL Capsules, o literature on NICOZOL for senile Psychoses.

..... M.D.

ty. .....Zone....State.....

DRUG SPECIALTIES, INC.
WINSTON-SALEM, N. C.

ETHICAL PHARMACEUTICALS

Sole Distributors in California, The Brown Pharmaceutical Co., Los Angeles

of nitrogen mustard and deep x-ray therapy will materially improve the status of advanced bronchogenic carcinoma.

Nitrogen mustard represents a valuable adjunct to the palliative therapy of advanced bronchogenic carcinoma, but it must be realized that this chemical is not carcinolytic and that its beneficial effects are only transient.

Hatch, H. B., et al., *J.A.M.A.*, 160:1129-1130, 1956.

Dramamine Reduces Postoperative Vomiting

Dosage: 1 cc. (50 mg.) intramuscularly on call to surgery, 1 cc. (50 mg.) intramuscularly on return from surgery, and then 1 cc. (50 mg.) intramuscularly every four hours for four doses. No attempt at selection of cases was made, nor were there any alterations in the use of opiates pre- and post-operatively.

For children under five years of age, the dose was 25 mg. (omitted in children under 1½ years of age and in tonsillectomies.)

The incidence of vomiting in the control series of 1,502 patients was 22.6%. In the 8,849 cases in which Dramamine was used, the incidence of vomiting was 13.0%.

In this study, dimenhydrinate (Dramamine) was given to 9,243 patients to prevent postoperative vomiting. The parenteral administration of dimenhydrinate reduced the incidence of postoperative vomiting by 50%.

Moore, D. C., et al, *J.A.M.A.*, 159:1342-1345, 1955.

Preanesthetic Hypnosis with Rectal Pentothal

Venipuncture for sodium pentothal induction is often difficult and undesirable in the young. Initially, a saline enema is given the night prior to operation. Drug absorption was thought to be more reliable under this condition. If patients are admitted on the morning of operation, this is not feasible. It was also noted that many children who had an enema the evening before did not have a feces-free rectum. Rectal pentothal has been used in both groups with equally satisfactory results.

The solution is now given by a nurse in the "recovery room." Friendly conversation, picture books, music boxes and toys do much to allay fears. A lollipop (to be eaten later) is given to each child. At one time, the nurse read to them until they fell asleep.

No difficulty is met in inserting a small, lubricated catheter to administer the solution. Air, equal to the volume of the catheter, is injected after the solution, to make certain the entire measured dose is given.

Children having a desire to defecate are urged to retain as long as possible. We have found an adequate effect even in those who do have a bowel movement.

Other premedication is atropine one hour before time for operation.

The children usually become very drowsy within 15 minutes and are sleeping within 20 minutes. If the patient has been given the solution and there is a delay in starting the induction, a second dose is given consisting of half the difference between the hypnotic and the basal dose. This is usually 1 to 3 cc.

When used in hypnotic doses, rectal pentothal has been found to be safe and satisfactory. It is acclaimed by parents, operating room and ward personnel.

Atropine has been the only premedication.

Dosages have not exceeded 1.5 gr. (15 cc. of a 10% solution) and it has not been used in children suspected of having full stomachs.

Timberlake, Jr., R. M., *J. Maine M. A.*, 47:79-80, 1956.

Delayed Menarche and Amenorrhea

Delayed menarche may be a reflection of complete absence of sexual development (e.g., sexual infantilism), or it may be found in cases of normal sexual development except for the failure to menstruate. Postmenarcheal amenorrhea may

arise from lesions directly impairing some link in the hypothalmic-pituitary-ovarian mechanism which sustains sexual function, or from a variety of disorders whose mode of interference with this mechanism is not clear. Cases of postmenarcheal amenorrhea may be due to: destructive lesions (Froehlich's syndrome), functional disturbances (emotional disorders) involving the pituitary, certain conditions inducing functional hypopituitarism (hyperthyroidism, hypothyroidism, diabetes mellitus, diseases of the adrenal cortex, chronic infections, debilitating diseases, obesity, undernutrition, and to certain disturbances of the ovaries.

Rational therapy is dependent upon precise diagnosis. If a patient shows normal feminine secondary sexual development, there is nothing to be gained by hormonal treatment. False amenorrhea due to an imperforate hymen is readily relieved by incision and drainage.

Silver, H. K., et al, *Handbook of Pediatrics*, p. 169, 1955.

Precautions and Contraindications In Immunization

Precautions:

1. Before each injection, needles and syringes must be sterilized by autoclaving, boiling or dry heat. The skin and the rubber stopper of the container should be sterilized with 2% iodine tincture or other suitable antiseptic.

2. Antigens, containing alum or aluminum hydroxide, should be injected intramuscularly. To prevent fat necrosis along the track of the needle, do not allow the outside of the needle to become coated with alum or aluminum hydroxide and end the injection with 0.1 to 0.2 cc. of air. Fluid toxids and saline-suspended vaccines should be given subcutaneously except where intracutaneous injection is specified.

3. Infants who have had febrile convulsions should be given fractional doses of antigen to test tolerance. Consider the prophylactic use of elixir of phenobarbital. At the second injection, question the parent about fever, somnolence and local reactions. If these have occurred, decrease the volume of the second injection. If a convulsion or severe reaction is reported, withhold further injections for several months and then give single antigens only, beginning with fractional doses (0.5 to 1.0 cc.) to test tolerance.

4. Give acetylsalicylic acid, 1 gr. per year of age, within an hour or two of the injection and repeat four hours later.

Contraindications:

1. Respiratory or other acute infections: Prolong the interval between injections (even up to six months); this rarely interferes with final immunity.

2. Cerebral Damage: Withhold active immunization until after one year, because of danger of severe reaction. Use fractional doses of single antigens rather than the usual double antigens.

3. Poliomyelitis Outbreaks: Exceptions include concurrent outbreaks of diphtheria, pertussis, typhoid or smallpox.

4. Eczema or other Skin Diseases: Withhold smallpox immunization (may produce generalized vaccina); withhold from siblings also (danger of cross infection), unless siblings can be effectively isolated for a period of 20 days.

Silver, H. K., et al., *Handbook of Pediatrics*, p. 111, 1955.

Alevaire in Pediatric Lung Infections

A drop in the mortality rate of infants and young children with respiratory diseases from 35% to 2.6% is attributed to aerosol inhalation of the mucolytic detergent, Alevaire.

The children were under five years of age, the majority less than one year of age. They suffered from a variety of bronchopulmonary diseases in which excess formation of thickened mucus was a serious problem.

In almost all cases given nebulized Alevaire, improvement of dyspnea was noted in the first 24 hours. There was a thinning of viscid secretions which permitted "gasping and choking" patients to breathe easier until the discharge, when respiration returned to normal.

Hidalgo, G., et al., *Philippine J. Ped.*, 4, 1955.

Prophylactics in the Eyes of Newborn Infants

A total of 12,599 infants born in five teaching hospitals were alternated as to the type of conjunctival prophylaxis employed, 5,489 received 1% silver nitrate, and 7,110 Erythromycin ophthalmic ointment.

Records of the number and severity of conjunctival reactions were kept in 2,333 of the infants. Erythromycin greatly reduced the number of such reactions, and, to an even greater degree, their severity. Erythromycin ophthalmic ointment was found to be easy to apply, stable for long periods without refrigeration and equally or more effective in the protection of newborn infants' eyes against gonococcal infection.

Wachter, H. E., et al., *Missouri Med.*, 53:187-190, 1956.

a "judicious combination..."

for antiarthritic therapy

SALCORT*

That cortisone and the salicylates have a complementary action has been well established.[1-5] In rheumatic conditions, functional improvement and a sense of feeling well are noted early. No withdrawal reactions have been reported.

One clinician states: "By a judicious combination of the two agents . . . it has been possible to bring about a much more favorable reaction in arthritis than with either alone. Salicylate potentiates the greatly reduced amount of cortisone present so that its full effect is brought out without evoking undesirable side reactions."[1]

INDICATIONS:

Rheumatoid arthritis . . . Rheumatoid spondylitis . . . Rheumatic fever . . . Bursitis . . . Still's disease . . . Neuromuscular affections

EACH TABLET CONTAINS:

Cortisone acetate	2.5 mg.
Sodium salicylate	0.3 Gm.
Aluminum hydroxide gel, dried	0.12 Gm.
Calcium ascorbate (equivalent to 50 mg. ascorbic acid)	60 mg.
Calcium carbonate	60 mg.

* U.S. Pat. 2,691,662

1. Busse, E.A.: Treatment of Rheumatoid Arthritis by a Combination of Cortisone and Salicylates. Clinical Med. 11:1105 (Nov., 1955).
2. Ruskam, J., VanCouvenberge, H.: Abst. in J.A.M.A., 151:248 (1953).
3. Coventry, M.D.: Proc. Staff Meet., Mayo Clinic, 29:60 (1954).
4. Holt, K.S., et al.: Lancet, 2:1144 (1954).
5. Spies, T.D., et al.: J.A.M.A., 159:645 (Oct. 15, 1955).

BRISTOL, TENNESSEE
NEW YORK
KANSAS CITY
SAN FRANCISCO

The S. E. Massengill company

BOOK REVIEWS

Clinical Psychiatry

by W. Mayer-Gross, M.D., F.R.C.P. Eliot Slater, M.A., M.D., F.R.C.P. and Martin Roth, M.D., M.R.C.P. 1954. $10.00. The Williams & Wilkins Company, Baltimore 2, Maryland.

A reason given for undertaking the writing of this new textbook is the incompleteness of the range covered by extant texts; another, that too many works stress the author's personal point of view so that certain aspects of psychiatry receive undue attention. Instead of attempting to provide a systematic presentation of the more important general concepts, theories and methods, as an introduction to a discussion of the application in special fields, the hope is expressed that it would be more useful to discuss these general concepts and theories in the context of the special aspects to which they are naturally applied, so that their meaning, their relevance and their limitations become at once apparent.

The opinion is expressed that psychiatrists have in the past given too much of their time and thought to abstract issues, and have never been rewarded by finding a final answer; that they would have done better to have kept to their main task, the attempt at a comprehension of observable facts.

The foregoing, from the preface, is in an earnest book that will be understandable to the general practitioner, and so prove of exceptional value.

Illustrated Review of Fracture Treatment

by Frederick Lee Liebolt, A.B., M.D., Sc.D., LL.D., New York Hospital, and Cornell University Medical College. Lange Mdical Publications, Los Altos, California. 1954. $4.00

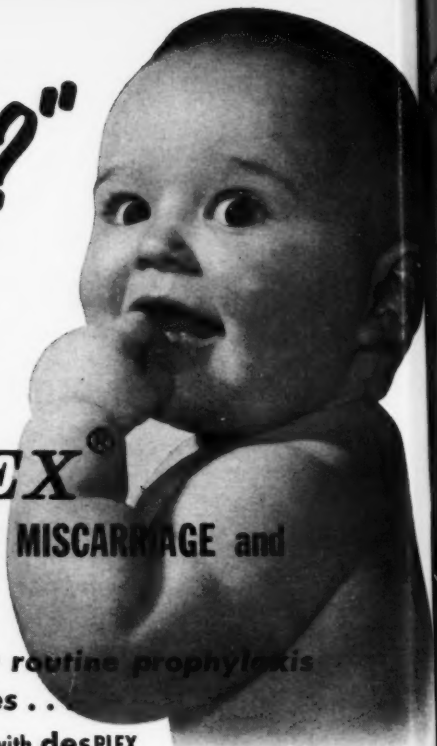
Illustrations and text are combined to make a book of great usefulness to those who treat fractures.

Hypnotic Suggestion

Its Role in Psychoneurotic and Psychosomatic Disorders. A Thesis by S. J. Vam Pelt, M.B., B.S., President of the British Society of Medical Hynotists, Editor of the British Journal of Medical Hypnotism. Philosophical Library, 15 East 40th Street, New York, N. Y. 1956. $2.75

Those who believe in the possibility of benefits from hypnotism can learn about it in an hour or so.

"Really?"



Yes...

desPLEX®

to prevent ABORTION, MISCARRIAGE and PREMATURE LABOR

recommended for routine prophylaxis in ALL pregnancies . .

96 per cent live delivery with desPLEX in one series of 1200 patients[4]— — bigger and stronger babies, too.[cf. 1]

No gastric or other side effects with desPLEX — in either high or low dosage[3,4,5]

(Each **des**PLEX tablet starts with 25 mg. of diethylstilbestrol, U.S.P., which is then ultramicronized to smooth and accelerate absorption and activity. A portion of this ultramicronized diethylstilbestrol is even included in the tablet coating *to assure prompt help in emergencies.* **des**PLEX tablets also contain vitamin C and certain members of the vitamin B complex to aid detoxification in pregnancy and the effectuation of estrogen.)

For further data and a generous trial supply of **des**PLEX, write to:
Medical Director

REFERENCES

1. Canario, E. M., et al.: Am. J. Obst. & Gynec. 65:1298, 1953.
2. Gitman, L., and Koplowitz, A.: N. Y. St. J. Med. 50:2823, 1950.
3. Karnaky, K. J.: South. M. J. 45:1166, 1952.
4. Peña, E. F.: Med. Times 82:921, 1954; Am. J. Surg. 87:95, 1954.
5. Ross, J. W.: J. Nat. M. A. 43:20, 1951; 45:223, 1953.

GRANT CHEMICAL COMPANY, INC., Brooklyn 26, N.Y.